University of Alberta

The Moral Terrain of Spatial Politics: Local Opposition to Sour Gas Development in Alberta, Canada

by

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Abstract

This thesis explores the spatial politics of petroleum development in Alberta, Canada. In recent years, some rural residents in Alberta have been working to prevent an expanding petroleum industry from siting facilities near their communities. At the centre of these siting conflicts is sour gas, a toxic, invisible byproduct of the petroleum industry that has been blamed for a number of health problems. The research involved in-depth interviews with members of two grass-roots initiatives that mobilized to stop proposed sour gas development. The research found that an important dimension of community resistance was a moral realm called the 'good life.' In particular, stories told by participants in interviews reflected the 'moral order' of country residential living. This research shows that belittling community resistance as stereotypical 'NIMBY' behavior failed to capture the basis of community opposition to sour gas development in the cases examined.

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1 INTRODUCTION

1.1 Introduction

The main goal of this thesis is to explore the spatial politics of oil and gas development in Alberta, Canada. Spatial politics stands for the struggles, resistance and conflicts waged over geography (Cresswell, 1996; Keith & Pile, 1993; Pile & Keith, 1997). Decisions around the organization or use of space are often political because while society celebrates diversity, society ultimately must share a common territorial space (Amin, 2004). Through social, cultural, and economic processes these shared spaces are shaped into mosaics of meaningful places that are stamped with memories, power, social relationships, cultural significance and meaning (Peet, 1998). Thus places are often at the center of contestation and resistance. As groups struggle to make or resist changes to places they must answer the following question: what is good or bad for this place?

This thesis will explore the moral terrain of spatial politics through an examination of local public opposition to the proposed siting of natural gas development in Alberta, Canada. In recent years, some rural residents in Alberta have been working to prevent an expanding oil and gas industry from siting facilities in or around their communities. Oppositional strategies have ranged from participation in regulatory hearings, to public protest, to violent instances of industrial sabotage. Community objections to locally unwanted land uses (LULU's) such as natural gas development are often branded as not-in-my-backyard (NIMBY) responses, one common expression of spatial politics. The NIMBY label refers to the "protectionist attitudes of and oppositional tactics adopted by community groups facing an unwelcome development in their neighbourhood" (Dear, 1992). Put simply, the NIMBY concept stands for the motivation to protect ones turf[1].

NIMBY reactions arise in response to activities that are accompanied by negatively perceived externalities or 'spill-over effects', most notably waste disposal facilities (Hunter & Leyden, 1995; Rabe, 1994; Szasz, 1994) and human services facilities (Dear, 1992). NIMBY reactions generally refer to the tendency of local residents to challenge developments whose effects are local, but whose benefits accrue to private interests or to the larger community. Research on NIMBY reactions has produced a general concept to explain the phenomenon. The NIMBY concept is generally characterized by (1) a parochial or localized attitude towards the proposed facility or land use, (2) distrust of project proponents, (3) limited information about the proposal, (4) high concern about project risks, and (5) highly emotional responses (Kraft & Clary, 1991; Smith & Marquez, 2000).

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[1] I am presenting NIMBY as a sub-phenomenon of spatial politics (sometimes referred to as turf politics).

As the NIMBY phenomenon has spread so has its critics. The NIMBY phenomenon is linked to *siting gridlock,* an arena of conflict for planners and policymakers and, correspondingly, a topic in the scholarly literature for the last 20 years (Armour et al. 1984; Portney, 1991; Lulof et al., 1998). Critics of NIMBY see the phenomenon as an impediment to progress. As such the NIMBY label often carries a negative connotation. Furthermore, critics often indiscriminately apply the NIMBY label in an attempt to discredit local opposition by characterizing the motives of residents or activists as selfish or irrational (Freudenburg & Pastor, 1992). However, when examined closely, NIMBY responses are often prudent (Freudenburg & Pastor, 1992) and better explained in terms of place attachments, public perceptions of risk, trust in authorities and experts, and ethical perspectives rather than through notions of selfishness and irrationality (Baxter et al. 1999; Freudenburg & Pastor, 1992; Hunter & Leyden, 1995; Kraft & Clary, 1991). Recent reviews on NIMBY have called for further clarification of the concept by addressing the contextual nature of NIMBY conflicts (Luloff et al., 1998). Three contexts in particular have been suggested for broadening the understanding of the NIMBY phenomenon (Freudenburg & Pastor, 1992; Smith, 2000).

First, NIMBY conflicts are inherently geographical because they revolve around aspects of location and place. Localism is an inherent quality of NIMBY controversies and stands for privileging one's immediate locale over others (Dear, 1992). Some claim that geographical proximity is a universal factor in all NIMBY conflicts in the sense that the closer residents are to an unwanted facility the more they will oppose it (Dear, 1992; Smith, 1981). In another sense, however, the geographical context is important because places and landscapes are symbols of meaning that frame social life and values within a community (Tuan, 1977; Mitchell, 2000). In many cases, a proposed facility is judged in terms of how it fits or does not fit with existing interpretations of place (Cresswell, 1996).

Second, NIMBY conflicts often centre on the threat or dangerousness of proposed facilities (Hunter & Leyden, 1995; Lulof et al. 1998; Kraft & Clary, 1991; Rabe, 1994). The language of risk has thus become a trade-mark of NIMBY movements (Freudenburg & Pastor, 1992). In conflicts over risk divisions between expert knowledge and lay knowledge inevitably arise (Beck, 1992). In most cases the former is given more social value than the latter by administrators and planners (Tesh, 2001). As expert knowledge is privileged in decision processes around risk, opinions or claims held by the public are devalued and written off as unscientific or irrational (Tesh, 2001). Citizens, however, are becoming increasingly driven to take action, not only by the uncertainty of the risks they face, but also by the failure of decision-makers and regulators to live up to their responsibilities (Beamish, 2001; Freudenburg, 1993). This context is integral to the controversial realm of NIMBY politics.

Finally, there is an important moral context to NIMBY conflicts (Smith, 2000). NIMBY movements centre on land use, more specifically appropriate land use (Cresswell, 1996). Land use is a normative term that invites moral evaluation (Smith, 2000). NIMBY movements advocate what NIMBY activists hold as the 'right' kind of land use. Often the right kind of land use is defined around notions of group membership, insiders versus outsiders, safe and dangerous, good and bad, appropriate and inappropriate. Furthermore, NIMBY conflicts hit at the heart of the contradictions within society, especially when it comes to the distribution of risks and benefits (bads and goods). When risks are imposed on a small group while distributing the benefits or incentives to a larger group (either consumers, stockholders, residents of other communities, and so on) conflicts centering on matters of justice and ethics emerge. NIMBY movements are thus indelibly linked to notions of environmental equity and fairness.

Environmental equity is a term that describes disproportionate effects of environmental hazards on people and places (Cutter, 1995). Under contention are situations where a community is asked to bear the costs of activities that benefit the larger group or collective good. This is often referred to as the 'reverse commons effect', an arrangement where a few members of the community are forced to make sacrifices for the larger community (Edelstein, 1988). The notion of environmental equity is a principle affirming that environmental problems should not be disproportionately concentrated in socially or economically disadvantaged communities (Lake, 1996). Geographers have been instrumental in understanding equity issues by mapping the spatial correlations between disadvantaged communities and environmental problems (Bullard, 1993, 1994). The NIMBY phenomenon is related to environmental equity in the sense that some communities possess the social capital to resist unwanted development more than others and thus influence siting decisions and ultimately how environmental problems are distributed on the landscape. Michael Dear has described the resultant spatial situation as an arrangement of "feudal fiefdoms defended by NIMBY walls" (1992, p. 288). In this light, recent research has stressed the importance of understanding the processes creating the landscapes within which distributions are embedded including how proponents site LULU and why and how communities resist them (Lake, 1996).

In response there has been a call for further research on the contextual variables that inform how and why communities oppose LULU's (Kraft & Clary, 1991; Luloff et al., 1998). This thesis adds to existing understandings of spatial politics (Amin, 2002; Massey, 2004) by providing a contextual understanding of the NIMBY politics surrounding natural gas development in rural Alberta. There is a moral geography underlying the spatial politics of natural gas in Alberta, an example of which is the moral space of country residential development. From a theoretical perspective, positioning oneself in relation to the 'good' or the 'bad' unfolds in concert with the construction of spaces, places and landscapes (Smith, 2000; Tuan, 1989). Definitions of what is right, good and appropriate are achieved through boundary-maintenance and spatial exclusion, often in reaction to what is deemed socially or geographically inappropriate or 'out of place' (Cresswell, 1996; Sibley, 1995; Smith, 2000). What this thesis will show is that collective responses towards pollution such as that associated with natural gas development are rooted in underlying impulses to control places and community relations. This is accomplished by controlling boundaries: social boundaries between clean and polluted, and spatial boundaries between their community and sour gas. The telling of stories that legitimated these boundaries is a primary strategy that activists use to justify their actions and is a window into how Albertan's rationalize their NIMBY politics.

In what follows, I reconstruct the controversy surrounding the siting of two 'risky' petrochemical facilities in close proximity to two, peri-urban communities while focusing on the experiences of two grass-roots initiatives and their members that mobilized to stop the nearby development of Level IV[2] exploratory sour gas wells. Over the past ten years, the siting of sour gas developments in Alberta has evolved into a highly controversial issue. Sour gas is natural gas[3] that contains a hydrogen sulphide (H_2S) content of 1% or greater. H_2S is poisonous, invisible and prolonged human exposures to concentrations as low as 100 parts per million (ppm) can result in death (AEUB, 1990). Sour gas is routinely combusted at well sites and sour gas plants, and in some cases (depending on the concentration), is released directly to the atmosphere. Acute exposures to low levels of H_2S induces nausea, headaches and eye irritation. Acute exposures to moderate or high concentrations of H_2S can result in unconsciousness, pulmonary edema and, if untreated, death. Little is known about long-term, low level exposures to H_2S, but some studies suggest low-level exposures over the long term can result in neurological damage in humans and animals (Kilburn, 1997; Scott, 1998). Sour gas flaring has been blamed for a number of health problems including spontaneous abortions in cattle and humans, lung disease and skin rashes (Nikiforuk, 2001).

Approximately 30% of the natural gas produced in Canada is sour; 85% of which is processed in Alberta (Petroleum Communication Foundation, 2000). The complexity and uncertainty of managing the risks and impacts of sour gas development, coupled with several recent high profile sour gas incidents has cast a shadow over attempts to successfully site new developments. As public awareness and concern mount, and industry, regulators and the general public become more polarized, it has become common for local residents to mobilize into community action groups in an attempt to stop the development of sour gas reserves in close proximity to their homes. In such cases, some conflicts have escalated into industrial sabotage and murder (Laird, 2002; Nikiforuk, 2000).

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[2] 'Level IV' is a designation used to define the largest and most dangerous sour gas wells.

[3] Natural gas is a fossil fuel whose main ingredient is methane (CH_4).

By reconstructing two examples of spatial politics this research grants insight to the resources, opportunities and strategies utilized by activists during such struggles. By analyzing how activists frame their positions and arrive at strategies of action this research sheds light on how and why people become politically conscious and willing to participate in struggles to preserve their respective locales. Insight to the exterior and interior life of activism is key for illuminating the processes operating beneath the NIMBY movements; one process that has come to symbolize spatial politics in North America. This exploratory study examines such struggles through an investigation of participant stories used to convey events that constituted each case and to explain, justify, and describe their actions.

1.2 Study Objectives

The primary questions guiding my research are: (1) What happened in the two cases under investigation; (2) what resources and strategies of action did opponents pursue; and (3) how did participants 'rationalize' their resistance to oil and gas development in Alberta? The study has three inter-related objectives situated within a collective case study of two citizen groups and their struggle to stop sour gas development:

- To retrace the events of each case;

- To examine how study participants rationalized their resistance to sour gas exploration and production in their community; and

- To develop/adapt a conceptual framework for understanding NIMBY opposition to sour gas development in Alberta.

1.3 Background

Over the last thirty years, the unbridled growth of the Alberta petroleum industry has been accompanied by a rise in public concern over the risks associated with upstream production activities[4] (Marr-Laing & Severson-Baker, 1999). The Alberta oil and gas industry has grown from 70 oil and gas companies in 1974 to more than 1500 in 2002 (Alberta Energy and Utilities Board, 2003b). Over this period, the industry evolved from a market dominated by multinational heavy weights to one populated by multi-nationals and home grown local companies (Marr-Laing & Severson-Baker, 1999). The Alberta Energy and Utilities Board (AEUB), the provinces' quasi-judicial regulator of energy resources, oversees more than 317, 000 kilometers of pipeline, approximately 110, 000 gas wells and more than 700 gas plants (AEUB, 2003b). The AEUB received and processed 28,728 facility applications in 2000 alone (AEUB, 2001b). That same year, the AEUB granted 16,307 new well licenses. These licenses included approvals for the drilling of both sweet and sour wells[5]. As sour gas production has increased, so have public concerns. The increasing encroachment of oil and gas facilities, such as sour gas wells, on ranch lands, wilderness and rural communities over the past twenty years has intensified and has manifested most visibly in a number of high profile conflicts (Keeling, 2001; Nikiforuk, 2001). Such conflicts include:

- The 1981-1982 court battle between Zahava Hanen and Imperial Oil Ltd over the expansion of a sour gas extraction and processing facility in the Turner Valley Region (Keeling, 2001);

---

[4] The 'Upstream' petroleum industry refers to the wells, pipelines and compressor stations that gather oil and natural gas from underground reservoirs. The 'Downstream' petroleum industry refers to gas plants involved in refining oil and gas related products and centres for marketing and product distribution.

[5] 'Sweet gas' is natural gas containing a hydrogen sulphide concentration of 1% or less. 'Sour gas' is natural gas containing hydrogen sulphide concentrations of 1% or greater. In Alberta, sour gas may contain hydrogen sulphide concentrations anywhere between 1% and 40%.

- The 1994 confrontation between the Lubicon Cree and Unocal Canada over a proposed sour gas plant outside of Little Buffalo, AB (Gibson, Higgs, & Hrudey 1998);
- The 1998 murder on a ranch near Rimby, AB of Calgary oil executive Patrick Kent of KB Resources after a two-year dispute over a contaminated well (Laird, 2002);
- The 1998-1999 industrial sabotage of several Alberta Energy Company well sites in the Peace Country Region (Laird, 2002; Nikiforuk, 2001).

In 2000, 81 energy developments, an increase of 31 from the previous year, sparked enough controversy and contention between stakeholders to warrant an official public hearing (AEUB, 2001b). The fewest number of hearings ever held was 12, in 1992. In 2002, the AEUB received 869 complaints from residents relating to oil and gas operations, an increase of 12 from the previous year (AEUB, 2003b).

In response, the AEUB has taken several steps to address the growing discontent amongst Albertans. In January 2000, the AEUB formed the Advisory Committee on Public Safety and Sour Gas to review the regulatory system as it relates to public health and safety (AEUB 2002). The committee embarked upon an extensive consultation process with industry, experts and the general public. The end result was a report released in December 2001 detailing 87 policy recommendations (AEUB, 2001a). In January of 2001, the AEUB unveiled the Appropriate Dispute Resolution Program (ADR), a framework designed to resolve disputes concerning the Alberta energy industry before they deteriorate to the point requiring a public hearing (AEUB, 2001b). Of all the energy applications submitted in 2000, 1.7% (479) had a significant issue to resolve (AEUB, 2001b). In 2002, AEUB staff facilitated a total of 154 ADR processes, 39 more than the previous year (AEUB, 2003b).

Most recently, the AEUB has made serious attempts to build public confidence by establishing environmental partnerships and by coordinating local multi-stakeholder groups operating throughout the province (AEUB, 2003b). The Clean Air Strategic

Alliance (CASA) and the Cumulative Environmental Management Association (CEMA) are two environmental partnerships operating at the regional level. Both work to bring together regional stakeholders to collaborate on environmental management initiatives. CASA consists of industry, government, and community representatives who are working towards establishing regional, consensus-based air shed management systems (AEUB, 2003b). CEMA brings together regional stakeholders to manage the environmental impacts of the oil sands developments in North Eastern Alberta (AEUB, 2003b). 'Synergy groups' operate at the local level. 'Synergy groups' are an ongoing collaboration of diverse stakeholders (usually citizens, industry and government) who work together to resolve issues and improve communication at the local level (AEUB, 2003b). The AEUB estimates there to be more than 50 synergy groups in Alberta (AEUB, 2003b).

1.3.1 Flaring and Fugitive Emissions

In general, conflicts over gas exploration and production centre on the health and safety risks associated with operation emissions. Emissions can take various forms, however, the emissions under contention in Alberta are primarily flaring and fugitive emissions (Marr-Laing and Severson-Baker, 1999). Flaring is the controlled burning of natural gas that cannot be processed or sold (Petroleum Communication Foundation, 2000). A gas stream is diverted and sent up a metal pipe known as a flare stack, where it is ignited by a pilot light. During combustion, natural gas is converted into less harmful compounds such as carbon dioxide (CO_2) and sulphur dioxide (SO_2), which are subsequently released directly to the atmosphere.

Flares are used throughout the oil and gas industry in Canada and around the world. There are several different types of flaring practices (Petroleum Communication Foundation, 2000). Solution gas[6] flaring is used to dispose of natural gas that accompanies crude oil and bitumen to the surface. Gas plant flaring is primarily used to dispose of by-products such as H_2S, water and CO_2 that are left over after the market ready natural gas has been produced, or to burn off gas during a safety emergency. Well-test flaring is used during the drilling and well-testing phases of oil and gas upstream production. Flaring allows drillers to test the type of fluids the well will produce, and the pressure and flow rates of the underground reserve. Natural gas battery[7] and pipeline flaring is used to burn off gas during emergencies or during maintenance shutdowns. A majority of the upstream flaring activity is solution gas flaring. In 1998 it comprised 77 per cent of all flaring in Alberta (Petroleum Communication Foundation, 2000). Flaring is a vital tool for Alberta oil and gas facilities, particularly, because of the flammable and toxic properties of sour gas.

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[6] 'Solution gas' is natural gas contained in crude oil. When brought to the surface, the change in pressure causes the crude oil and natural gas to separate (Petroleum Communication Foundation 2000).

As of late, the oil and gas industry has come to realize that solution flares do not burn at 99% efficiency, as was once assumed (Strosher, 1996). In fact, a flare efficiency study recently revealed that flares fully combust 64 – 85 per cent of the gas that is directed to them (Strosher, 1996). Tests in this study found that in addition to CO_2 and SO_2, 250 different and harmful compounds were emitted during flaring (Strosher, 1996). Incomplete combustion of solution gas can produce the following (Marr-Laing & Severson-Baker, 1999):

- Sulphur Dioxide (SO_2) – an emission linked to acid deposition, irritation of upper respiratory tract, increased susceptibility to respiratory infection, chronic respiratory disease, and death;
- Nitrogen Oxides (NO_X) – an emission associated with acid deposition, ground level ozone, and fine particulate matter;
- Volatile Organic Compounds (VOC's) – an emission including known carcinogens such as Benzene and contributing to the formation of particulate matter and ground level ozone;
- Hydrogen Sulphide (H_2S) – an emission associated with tearing of the eyes, headaches and loss of sleep at concentrations as low as 1 ppm and death at concentrations of 100 ppm;

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[7] 'Natural gas batteries' are facilities where gas from one or more wells is processed and stored (Petroleum Communication Foundation 2000)

- Carbon Disulphide – a poison that can affect the central nervous system of humans and animals; and
- Polycyclic Aromatic Hydrocarbons – a highly toxic organic emission.

'Fugitive emissions' are a second source of contention and controversy for landowners, rural communities and the Alberta oil and gas industry. Fugitive emissions are vapor or fluid leaks from petroleum infrastructure such as pipelines, well-sites, natural gas batteries, or gas plants (Marr-Laing & Severson-Baker, 1999; Petroleum Communication Foundation, 2000). Fugitive emissions can originate from venting[8] at oil and gas sites or through accidental releases of sour gas[9]. Between 1980 and 1997 there was an average of 674 pipeline failures per year in Alberta (AEUB, 1998). In 2002, the AEUB recorded 751 pipeline leaks and 1434 liquid spills from pipelines and other upstream oil and gas sources (2003b). In that same year, the AEUB recorded 11 blowouts, all of which were brought under control with little environmental impact or threat to public safety (AEUB, 2003b). Together, processes such as flaring and events such as fugitive emissions combine to create a formidable hazard; one that simultaneously carries low-level, long term risks (flaring emissions) and catastrophic potential (blowout).

Over the last seven years the AEUB has made significant gains in reducing overall solution gas flaring and venting and increasing solution gas conservation (AEUB, 2003a). Between 1996 and 2002, solution gas flaring was reduced by 62 per cent (AEUB, 2003a). Venting, however, increased between 1999 and 2000 by upwards of 30% (AEUB, 2003a). Rates for flaring and venting in Alberta are presented in Table 1.1.

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[8] 'Venting' is the direct, controlled release of natural gas to atmosphere.

[9] This is most commonly referred to as a 'blowout': the complete loss of control of fluids from a well (AEUB 2003).

Table 1.1 Solution Gas Flaring and Venting Volumes

Year	*Flaring (10^6 m^3)*	*Venting (10^6 m^3)*
1999	937	459
2000	831	704
2001	624	600
2002	510	496

Source: AEUB, 2003a

Flaring reductions have been attributed to the CASA process that was implemented in 1996 (AEUB, 2003a). As well, industry now sees flaring as a less than desired practice that wastes potentially saleable natural gas (AEUB, 2003a).

1.3.2 Protecting Public Safety

To safely handle sour gas hazards the AEUB has embraced a series of risk management approaches that are designed to ensure public safety. These include numerous technical standards for equipment, operations, and minimum setback requirements for locating sour gas facilities (AEUB, 1994). The primary location criteria for siting sour gas developments include the subsurface geology, land surface conditions, proximity to existing petroleum infrastructure, environmental considerations such as impacts and disturbances, and distances from human infrastructure such as dwellings. In 1979, the AEUB adopted a series of guidelines for establishing safe distances – setbacks - between facilities and human populations (AEUB, 1994). These setbacks, still in use today, are based on the danger associated with sour gas facilities (see Table 1.2).

Table 1.2 Minimum Setback Distances for Sour Gas Facilities

Type of Sour Gas Facility	*Minimum Setback Distance (m)*
Level 1	100
Level 2	500
Level 3 and 4	1500

Source: AEUB 1994

These were based upon technical factors such as past occurrences of accidental releases, H_2S content and pressure, pipeline size and other mitigative measures that existed at that time (AEUB, 1994). More recently, the AEUB has turned its attention towards developing concepts to mathematically define and characterize public safety risks associated with the sour gas industry. In the early 1990s, the AEUB designed a simplified approach called *GASCON 2* that they believed could estimate the individual and societal risk from potential uncontrolled sour gas releases (AEUB, 1994).

In addition to technical standards and risk analysis tools, the AEUB has developed other risk management tools to protect the public in the event of an accidental release. As already mentioned, the AEUB sees setbacks as an important tool for ensuring public safety by locating dangerous facilities at safe and manageable distances from human populations. Another risk management tool is the emergency response plan (ERP). ERPs are a recipe for protecting the public in the event of an accidental release (AEUB, 1994). An ERP is a pre-defined procedure for responding to protect public safety in the event of an emergency situation. ERPs consist of concrete action plans such as public notification plans or, in the worst-case scenario, evacuation plans. The area of land covered by the ERP is called the emergency-planning zone (EPZ). In the case of chemical hazards, the size and shape of EPZ is related to the distance a chemical release could travel, the response time of emergency response units such as ambulances and firefighters, and the availability of various protective action options such as shelter or breathing apparatuses (Rogers et al., 1994; Walker et al., 2000). AEUB policy requires companies to use a mathematical formula to calculate the size of EPZ (AEUB, 1998). This formula takes into consideration the maximum and cumulative release rate of H_2S (AEUB, 1998). In addition, the size and shape of the zone must take into consideration the local characteristics of the landscape and the density of the population.

1.3.3 Sour Gas, Bitter Relations

Despite attempts by regulators and industry to improve the safety of sour gas operations, accidents have continued to occur. One of the biggest sour gas releases in the history of Alberta occurred in Lodgepole, AB in 1982 (Gephart, 1988; Nikiforuk, 2001).

The explosion at a sour gas well caused the deaths of two workers and resulted in the continuous release of highly toxic H_2S for 67 days (Gephart, 1988; Nikiforuk, 2001). Marr-Laing and Severson-Baker document three more recent accidental releases of sour gas (1999). A release in 1994 forced the evacuation of residents in the Sundre area. Three years later a similar release forced the evacuation of workers and residents at Rainbow Lake. In 1998, 30,000 cubic feet of 18% sour gas was accidentally released from a drilling site 50 km north east of Nordegg. Perhaps the most famous case of sour gas controversy began in 1996 in the Grande Prairie Region in northwestern Alberta. A series of oilfield bombings rocked the oil and gas industry. A local farmer named Weibo Ludwig and an accomplice named Richard Boonstra were eventually charged and convicted of some of the bombings (Nikiforuk, 2001; Laird, 2002).

Events such as these, coupled with the uncertainty of the scientific evidence on the human health impacts of chronic exposures to flaring and fugitive emissions, have contributed to growing conflict among citizens, industry and regulators over the appropriateness of siting sour gas developments in close proximity to human populations. Increasingly, rural communities, landowners and concerned citizens are mobilizing in an attempt to stop or change the path of oil and gas development in and around their respective localities (Marr-Laing & Severson-Baker, 1999). This has taken the form of anti-sour gas campaigns (Figure 1.1), community-action groups, public hearings or, as in Grande Prairie, highly publicized cases of industrial sabotage (Nikiforuk, 2001). Little research, however, has examined exactly how specific cases of opposition have progressed and unfolded within local contexts. This project addresses this gap in research by examining the experiences of two direct-action groups that mobilized to try and stop the drilling of a sour gas well in close proximity to their homes.

Figure 1.1 Postcard published by Western Canadian Wilderness Committee (2003)

1.4 Research Approach

For this research two case studies were examined. On July 15, 1997 Canadian 88 Energy Corporation applied to the Alberta Energy and Utilities Board for a well license to drill an exploratory level four, critical sour gas well approximately sixteen kilometres northwest of Calgary, Alberta. The well would determine the existence of potentially lucrative sour gas pool. One thing stood in Canadian 88's way - a surrounding unrestricted country development[10], home to residents who were bitterly opposed to any plan for sour gas development in their backyards. What transpired in the following two years was one of the most highly publicized disputes over sour gas development in recent Alberta history. A number of community groups comprised of ranchers, oil executives, geologists and retirees, worked with others to intervene and prevent the drilling. These groups questioned the safety of such a development sited in such close proximity to acreage homes, ranches and the city of Calgary (Figure 1.2 Lochend Area). After one of the longest public hearings ever relating to such an application, the Alberta Energy and Utilities Board gave Canadian 88 Energy Corporation approval with the provision that the company comply with eighteen conditions. Despite the community's apparent defeat, to this date, Canadian 88 has yet to fulfill all eighteen conditions and drilling has yet to commence (see Case Timeline in Appendix A).

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[10] 'Unrestricted country developments' are a collection of permanent dwellings outside of an urban centre that number more than eight per square section (AEUB, 2003). These are sometimes referred to as "acreage communities."

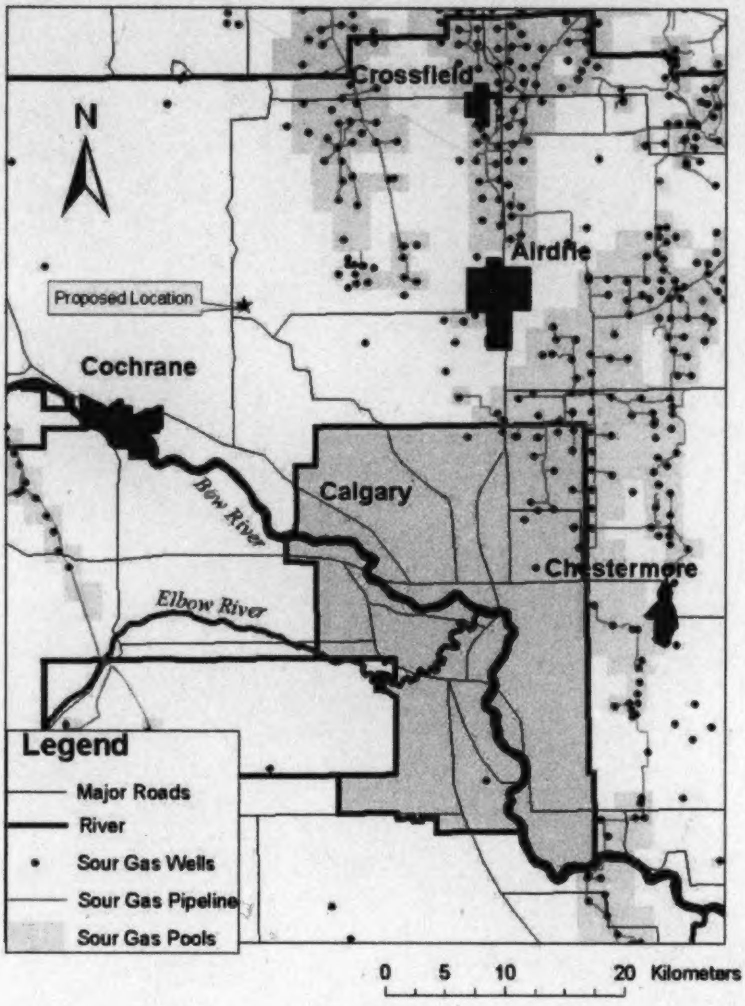

Figure 1.2 Lochend Area

In the summer of 1999, as Canadian 88 Energy Company attempted to meet the 18 conditions needed to obtain its well license, Shell Canada Limited applied for a well license to drill a similar well directly adjacent to farmland and an unrestricted community development lining the Clearwater river eight kilometres south of Rocky Mountain House, Alberta (Figure 1.3 Clearwater Area). Reminiscent of Canadian 88's proposal two years earlier, Shell Canada met with opposition from residents living in the immediate vicinity. Despite attempts by Shell to mediate the conflict and reach a compromise, opposition to the proposal was steadfast. One year later, the Alberta Energy and Utilities Board held a public hearing to consider evidence for and against the well before reaching a decision. The hearing itself attracted national media attention. After hearing testimony from landowners and experts, in its final decision, the board denied Shell Canada the well license needed to drill. The community had won (see Case Timeline in Appendix B). The preceding stories mark two landmark cases capping decades of growing rural opposition to sour gas development. What follows is a detailed reconstruction of the personal experiences of residents who intervened to stop these proposals.

1.5 Study Limitations

There are several limitations to this study. First, the sample assembled did not include every person who was involved in the conflicts. Time constraints did not allow all residents who were affected by each controversy to be interviewed. As well, some key individuals in the Lochend case study refused participation in the study due to concerns over confidentiality and anonymity. Second, this study was concerned only with the experiences of individuals who took action. Residents who may have felt the same but did not take action, and those residents with dissimilar viewpoints were not interviewed. The absence of a negative-case for analysis makes an investigation into the factors that either promoted or inhibited individual and collective action unfeasible. However, what can be sought is an understanding of the meanings of risk and place in the context of people's everyday lives as they engaged in civic action against an environmental hazard.

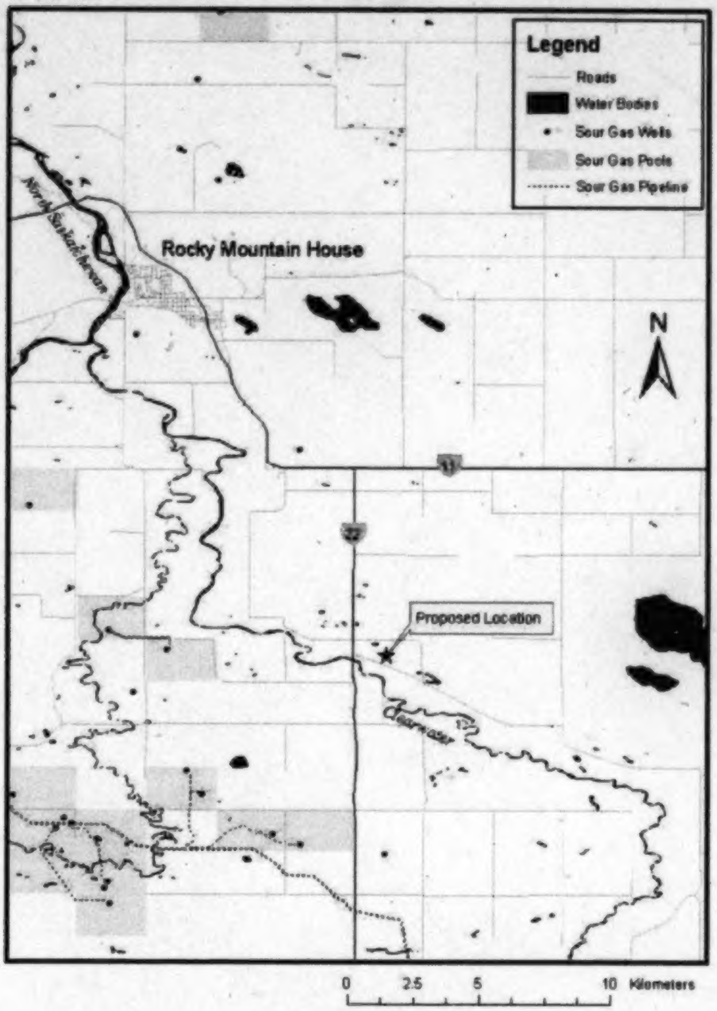

Figure 1.3 Clearwater Area

1.6 Organization of the Work

In what follows, Chapter 2 presents the literature that serves as the theoretical foundation for the study. The review links literature on 'moral geographies' to ideas developed around narrative and story telling, and socio-cultural theory on risk and modernity. Next, Chapter 3 summarizes the methodological approach and methods of data analysis employed in this study. A short introduction is given to discourse analysis with specific attention paid to the analysis of personal storytelling and the role it played in this study's examination of risk politics. Following this, Chapter 4 presents two community stories that trace the events of each case study, a set of themes that represent the experiences of respondents, and four story types that were used repeatedly throughout respondent's accounts of what happened. Chapter 5 explores the moral terrain of spatial politics by mapping the key ways that struggles over siting sour gas were struggles over right and wrong land use.

2 LITERATURE REVIEW

2.1 Introduction

This chapter explores the relationships between risk and modernity, moral beliefs and geography, and finally, narrative and social life to provide a theoretical foundation for this study. While substantial research has been done on modernization risks, moral geographies, narratives and community relatively few attempts have been made to combine or explore the connections between these literatures. This is surprising, as each body of literature seems to have a natural inclination for the other and in concert presents a powerful lens for understanding spatial politics. The following review consists of three sections. It begins by detailing the various theoretical approaches for understanding the new (or, some argue, timeless) prominence of dangers, threats, or 'risks' in everyday life. In the second section, the linkage is then made between the risk literature and the literature on moral geographies. Geographies of everyday moralities center on specific attitudes and attachments towards spaces, places, landscapes and environments and are visible in how we 'order' identity, community and place in terms of right and wrong, appropriate and inappropriate, and good and bad. In the final section, the review explores how identity, community and place are socially constructed or 'storied' through narrative discourse. Identity, community and place are 'ordered' through the telling and retelling of shared stories. What has been up to this point in time a collection of distanced literatures is combined here to create a framework for mapping spatial politics using the coordinates of identity, community and place, ideas about risk and danger, and the moral discourse of storytelling.

2.2 Risk and Modernity

A new quality of uncertainty characterizes everyday life in late-industrial, capitalist countries (Beck 1992, 1999; Giddens 1990, 1991). Society has become 'de-traditionalized,' and increasingly we grow more dependent upon abstract and dissembedded systems for our survival (Beck 1992, 1999; Giddens 1990, 1991). We live in a speculative age dominated by the heightened awareness of the pervasiveness of toxins and contaminants that evade easy detection and stay in the environment for generations. Whereas in the past technology was seen as the cornerstone of progress, increasingly technologies are interpreted alongside sentiments of dread, fear and anxiety. More than ever, individuals must negotiate this environment and in the process 'cobble' together their own personal biographies. As Ulrich Beck explains, "Personal biographies as well as world politics are getting 'risky' in the global world of manufactured uncertainties" (1999, 5). An understanding of everyday experiences in late-industrial societies would be lacking if it overlooked the 'dangers' that institutions, communities and individuals identify for attention and negotiate as they strive to meet their material needs.

2.2.1 What is 'Risk'?

It is safe to say that anxiety, fear and danger have always been part of the human experience. It is only recently, however, that these elements have been expressed through the language of risk. Risks are pervasive, powerful social constructs that are increasingly becoming part of the everyday vocabulary that people use to make sense of uncertainty, insecurity and danger (Wilkinson, 2001). Speaking of the western world, "it is now understood that we have become culturally disposed to express our anxieties in the language of risk, or conversely, it is through the cultural production of a new knowledge of the risks we face that our lives are conceived as having a new quality of insecurity" (Wilkinson 2001, 5). The 'age of risk' we live in is one of a heightened consciousness of the threats posed to us by all manner of things: the environment, technology and even others (Peterson & Lupton, 1996).

The definition of 'risk' varies with ontological and epistemological approaches to reality. In techno-scientific circles risk is understood as the probability of some threat occurring combined with the magnitude of the losses or gains entailed. In reaction to such a narrow definition of risk, recent psychological, sociological and anthropological work has tried to understand how threats are situated in individual, social and cultural processes. In a societal context, Ulrich Beck defines risk as "the modern approach to foresee and control the future consequences of human action, the varied unintended consequences of radicalized modernization" (1999, 3). Risk can be understood has a 'forensic resource,' (a diagnostic tool) for distinguishing between self and other, victim and villain, in a new global culture (Douglas, 1992). To be sure, risk has created new responsibilities and opportunities for the care and self-management of one's body, well being, community and environment (Peterson & Lupton, 1996). This study defines risk as the reflection upon unwanted outcomes of decisions made under conditions of uncertainty (Beck, 1992, 1999; Holst, 1999; Krimsky & Golding, 1992). In the past, it was theorized that structural positions such as class determined consciousness. The reverse is true in the speculative age of global risks and insecurities: risk consciousness is determining the experience of everyday life and in the process new solidarities are being forged around new political identities (Beck, 1992).

However conceptualized, judgements about risk occur in a moral and political dimension (Douglas, 1992; Beck, 1992). The negative externalities of modern industrial society, namely 'modernization risks,' have opened up new social cleavages. As a result the old moral questions about the allocation of wealth are being transformed into new moral questions about the allocation of risks (Beck, 1992; Douglas, 1992). The language of risk constitutes a new 'mathematized morality.' A mathematized morality stands for the utilitarian calculus of trade-offs in which the appropriate risk decision is the one in which the 'goods' outweigh the 'bads' (Beck, 1999). Risk statements, however, are both factual and subjective and therefore susceptible to continual unravelling. Questions of risk acceptance inevitably arise and with them moral ones: how do we want to live and how much more risk do we want to live with (Beck, 1992)? As Beck states, "one must assume an *ethical point of view* in order to discuss risks meaningfully at all" (1992, 29, emphasis in original). This is relevant to an exploration of spatial politics because many NIMBY conflicts revolve around risk and inevitably seek answers to the moral question stated above.

2.2.2 Responding to Hazards in the Environment

Risks and hazards are complex interactions between natural, social, and technological systems (Burton, Kates & White, 1992; Cutter, 1994; Smith, 1992). Traditionally, a distinction is made between natural hazards (beyond the control of society) and technological hazards (the internal failures of society) (Hewitt, 1997; Palm, 1990). Technological hazards are unique and draw different individual and community responses than natural hazards (Beck, 1992; Couch & Kroll-Smith, 1985; Cutter, 1993, 1994; Hewitt, 1997; Leiss & Chociolko, 1994; Waterstone, 1992). Technological hazards are brought into the home, consumed on a routine basis, and found in the very constituents of everyday life such as air, water and soil (Hewitt, 1997). Technological catastrophes such as contamination tend to emerge gradually and sporadically and thus make it difficult to mobilize a community response (Couch & Kroll-Smith, 1985). As well, contamination is often invisible: it is beyond the taste, touch, smell and sight of its victims (Couch & Kroll-Smith, 1985; Edelstein, 1988; Vyner, 1988). This uncertainty forces the lay public to become increasingly dependent upon science and expert intervention (Tesh, 2001). To complicate matters more, technological catastrophes are often the result of human error and thus raise issues of accountability, responsibility and blame (Couch & Kroll-Smith, 1985). These characteristics make technological hazards especially vulnerable to political contestation.

The political nature of risks and hazards is evident in the way individuals and communities respond to hazardous technologies, by-products and people. Individual and community-responses to environmental risk and contamination take general forms and are well documented in the social scientific literature (Edelstein, 1987, 1988; Lazarus & Folkman, 1984; Giddens, 1990; Elliot et al., 1999; Wakefield et al., 2001; Luginaah et al., 2002; Wakefield & Elliot, 2000). For example, theories of environmental stress and coping seek to explain how individuals and communities respond to disruptions in the environment (Lazarus & Folkman, 1984; Elliot et al., 1999; Wakefield et al., 2001). Responses to environmental risk generally involve a primary appraisal (individual evaluates the threat) followed by a secondary appraisal (development of individual and collective coping strategies) (Lazarus & Folkman, 1984). Coping strategies may be action-orientated or emotion-orientated (Lazarus & Folkman, 1984). Action-orientated strategies may include acts of radical-engagement such as direct confrontation where as emotion-focused responses may include instances of pragmatic acceptance of the environmental stressor, sustained optimism regarding its alleviation, or cynical pessimism (Giddens, 1990; Luginaah et al., 2002).

Recently, Wakefield et al. (2001) proposed a taxonomy of environmental action that builds on existing environmental stress and coping theories. In response to environmental risk, they propose four categories of environmental action: reappraisal of lifestyle options, personal change, individual civic action, and group civic action (Wakefield et al., 2001). When confronted with environmental risks, individuals may simply re-evaluate lifestyle options. For example, in the case of air pollution this could include staying indoors. Others may make intentional proactive changes. For example, this could include choosing alternative transit. In some cases individuals may embark upon individual civic action and in others individuals may join or form groups to carry out civic actions (as is the case in NIMBY movements). All encompass varying psychological benefits, social components and challenges. Where personal changes are relatively easy to make, individual and collective action is more difficult and time consuming.

2.2.3 Theoretical Approaches to Risk and Society

Numerous classification schemes have been developed to summarize the available approaches for analyzing risk (Bradbury, 1989; Freudenburg, 1992; Krimsky & Golding, 1992; Lupton, 1999). The purpose of this section is to review existing approaches to provide a background to the risk issues common to the realm of spatial politics. A useful classification when approaching risk issues is to identify three broad conceptual approaches: (1) techno-scientific; (2) individual; and (3) socio-cultural (Krimsky, 1992; Renn, 1992; Lupton, 1999). Techno-scientific approaches seek to quantify risks to facilitate analysis or management. Individual approaches try to understand the cognitive and behavioural aspects of individual risk preferences and perceptions to manage or change them. Finally, the socio-cultural approach is concerned with understanding the social, political and cultural significance of risk for institutions, the state, and everyday social life.

2.2.3.1 The Techno-Scientific Approach

When faced with environmental and technical hazards, the techno-scientific approach to analyzing risk has been the dominant method adopted by management circles in western industrial countries (Beck, 1992). The techno-scientific approach conceptualizes risks and hazards as real and open to scientific reduction. This approach consists of varying combinations of toxicological and epidemiological methods with engineering approaches including probabilistic risk assessments, pollution control devices, and waste disposal technologies. By anticipating potential harm to human beings, generalizing these events over time and space, and identifying event probabilities using relative frequencies, these approaches are useful for identifying hazards, eliminating them or designing management practices to mitigate their effects. Techno-scientific approaches to analyzing risk have provided the primary inputs for standards setting and the improvement of technological systems (Renn, 1992). In Alberta, they have also been an important input to AEUB regulatory policy.

The approach, however, is not without its criticism. The social sciences have been instrumental in pointing out the reductionism inherent in techno-scientific approaches (Freudenburg, 1988, 1992; Douglas & Wildavsky 1982). Much of the criticism accentuates the narrow framework offered by technical approaches. Techno-scientific approaches fail to account for the ways in which undesirable impacts are socially and culturally constructed, they often do not account for organizational dynamics operating in technological systems and they tend to lose resonance when applied to problems of low probability-high consequence hazards (Freudenburg, 1992). By reducing risks to statistics of physical harm or mortality, the techno-scientific approach excludes other ways that risk is experienced and selected for attention (Douglas, 1985, 1992). Despite criticisms, technical approaches continue to be amenable to policy use as they provide substantive foundations for decision-making in the form of comparable numbers. In this way, the technical approach has stabilized the decision-making arena relating to the assessment and management of technology, the environment, and health.

2.2.3.2 The Individualistic Approach

In contrast to the techno-scientific approach, individual approaches to analyzing risk have focused on the preferences, decision-making processes and perceptions of individuals confronted with risks (Slovic, 2000). Generally, individualist approaches have strived to clarify the differences between public and expert risk perceptions. In these approaches the perceived risk is the outcome of the interaction of an individual with his/her setting mediated through cognitive structures. This approach has encompassed psychological work on the cognitive aspects of risk evaluation. Initial work focused on econometric examinations of individual's and society's *revealed* risk preferences (Starr, 1969). This work argued that over time, through trial and error, society achieves a balance between risks and benefits. Later, work focused on individual decision-making under conditions of uncertainty (Kahneman & Tversky, 1979). This work hypothesized that the lay-person's decision-making under uncertainty involves the use of simplifying assumptions and biases. Alternatively, within the psychometric paradigm, understanding of *expressed* risk preferences was sought by analyzing the factors that shape the public's risk perceptions (Fischhoff et al., 1978, 1981; Slovic, Fischoff & Lichenstein., 1980). This research found that variables such as dread and knowledge influence lay perceptions of risk. In contrast, scientific experts tend to perceive risks as objective and quantifiable variables such as fatalities (Slovic, Fischoff & Lichenstein, 1980).

Despite their explanatory power, several limitations have been identified within econometric and psychometric approaches (Freudenburg & Pastor, 1992; Short, 1987; Baxter & Eyles, 1999). These limitations include a failure to adequately address how environmental risks and hazards are socially situated within individuals' and communities' day-to-day lives (Baxter & Eyles, 1999; Baxter, Eyles & Elliot, 1999). In essence, as *expressed* preferences, they do not account for the contextual nature of social and cultural life and cannot generate insight or understanding into the experience of living under these conditions (Krimsky, 1992).

A recent offshoot within the psychometric paradigm has been to explore the relationship between risk perceptions and the concept of stigma (Gregory et al., 1995;

Flynn et al., 2001; Slovic, 2000). Kasperson et al. define stigma as, "a mark placed on a person, place, technology, or product, associated with a particular attribute that identifies it as different and deviant, flawed or undesired" (2001, 19). There are six dimensions that influence the formation of stigma (Jones et al., 1984). These are:

- *Concealability* – the ability for it to be hidden;
- *Course* – how it changes over time;
- *Disruptiveness* – the degree it blocks communication;
- *Aesthetic qualities* – how it changes its possessor;
- *Origin* – who and where it is attributable; and
- *Peril* – how imminent and dangerous it is (Jones et al., 1984).

Early work on risk-induced stigma showed that technologies, places and people come to be negatively labelled as undesirable. What emerged was relationships between the images people have of technology, places and people and the propensity to stigmatize them. These images closely followed the dimensions outlined by Jones et al. (1984) and involved three stages: (1) risk related attributes receive high visibility and produce an amplifying effect; (2) marks are placed on the person, technology or place to distinguish it as dangerous or undesirable; and (3) the amplification and marks alter the identity of the person, place or thing (Kasperson et al., 2001). In this way, the concept of stigma has since been elaborated and built upon by Kasperson et al. to show how individual and social processes may exacerbate or attenuate the risk-induced stigmatization process (Kasperson et al., 2001). Work continues to grow and risk and stigma represents a large proportion of the work currently done within the psychometric paradigm (Flynn et al., 2001).

2.2.3.3 The Socio-Cultural Approach

The socio-cultural approach to risk considers the social and cultural, and sometimes historical, contexts in which risks and hazards are meaningful (and resisted). Contemporary social life and related subjectivities are two themes characterizing recent socio-cultural theory (Lupton, 1999). Risk has emerged as an important social construct that shapes and in some cases constitutes subjective experience of identity, community and place. In the following pages, two socio-cultural perspectives will be summarized because they are most relevant to this study: risk society and the cultural/symbolic perspective. The review situates these approaches along a continuum ranging from constructionism (things are socially produced) to realist (things are discovered), subjective to objective (see figure 1.4).

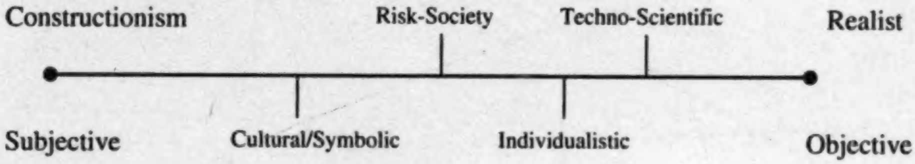

Figure 2.1 Theoretical Continuum of Risk Theory

The 'Risk Society' Thesis

The 'Risk Society' thesis is the most influential set of ideas on risk to emerge in the last ten years. This body of theory originated amongst the macro-scale theorizations of sociologists Ulrich Beck and Anthony Giddens (Beck, 1992, 1999; Giddens, 1990, 1991). Beck and Giddens argue that in late modern society risk has become the central concern of the primary institutions – government, science and industry (Lupton, 1999a, 1999b; Beck, 1992, Beck ,1999). Within this framework society is no longer premised solely on a distribution of wealth, but also on managing the uncertainty of the undesirable, unintended consequences of its own making. Risks of modernity – modernization risks – are the unintended side-effects of technological development (Beck, 1992, 1999). The catastrophic potential of modernization risks such as nuclear and chemical technology are transforming the institutions of modernity. Modernization risks are invisible, irreversible, are based on causal interpretations, exist primarily in terms of scientific knowledge, are not equally distributed and tend to follow the poor (Beck, 1992). In a risk society, conflict seems to strike those who produce or profit from risk (Beck, 1992). Knowledge in a risk society, specifically expert scientific knowledge, is elevated to a new level of importance. Individuals draw on 'expert' knowledge systems to make decisions about risk in their day-to-day lives. Science becomes an important player in managing the catastrophic potential of a society. This often includes a reorganization of power and authority (Beck, 1992).

The central themes of the risk society thesis – risk, danger, side effects, insurability, individualization and globalization – are united within what Beck calls a 'framework of manufactured uncertainties' (Beck, 1999a). What the framework above describes is a new epoch of society; one Beck, Giddens and others call 'reflexive modernization' (Beck et al., 1994). Reflexive modernization describes the way society and its institutions have begun to scrutinize the outcomes of their decisions, actions and relations thus making society itself the central theoretical and practical concern of new and contested knowledge. As Beck states:

> There is a major distinction between the conflict field of wealth production – 'goods' – from which the nineteenth century derived the experience and premises of industrial and class society, and the conflict field of hazard production – 'bads' – in the developed nuclear and chemical age (1999a, 63).

It is important to recognize that by 'reflexive' Beck does not mean 'reflection' but above all 'self-confrontation' (Beck, 1999). Beck contends that reflexive modernization is a "radicalization of modernity, which breaks up the premises and contours of industrial society and opens paths to another modernity" (1994, 3). The toxic 'democratic' externalities of modernity are now unconfined by traditional political borders and carry unimaginable consequences that undermine the pillars supporting the scientific methods that serve as the point of control for decision-making in an uncertain future.

Concurrent with the new epoch of 'reflexive modernity' is a trend towards what risk society proponents have labelled 'individualization' and 'personal reflexivity' (Beck, 1992, 1999; Beck et al., 1994; Lupton, 1999; Giddens, 1991). By individualization, they are referring to the way traditional forms of society have broken down and have been replaced by individual ones. In other words, individuals have become dissembedded from the traditional socio-cultural milieu. Through this process, risk, now more than ever, is conceptualized as amenable to personal control and responsibility. Aspects of life, such as the care of the self, are increasingly positioned as amenable to individual control. In response, individuals engage 'reflexively' with expert systems such as medicine, psychology and law. Lupton defines personal reflexivity as "a response to conditions that arouse fear or anxiety that is active rather than passive" (1999, 15). Lash has traced three types of reflexivity: cognitive, aesthetic and hermeneutic (Lash, 1994). Cognitive reflexivity refers to rational self-monitoring rooted in conceptual knowledge systems such as science (Beck, 1994; Lash, 1994). Aesthetic reflexivity refers to self-interpretation rooted in a situated and subjective 'sense of place' in the world (Lash, 1994). Finally, hermeneutic reflexivity refers to self-interpretation rooted in shared meanings of a community (Lash, 1994; Lupton, 1999).

Personal reflexivity is a component of a new level of politics; what Beck and others call 'sub-politics,' and what others have labelled the 'new social movements' (Buttell, 1992; Finnegan, 1997). Sub-politics refers to the politics that occur outside the traditional political institutions of modernity. It has been described as 'direct' politics or, 'the shaping of society from below' (Beck 1999, 39). As Beck contends, "Economy, science, career, everyday existence, private life, all become caught up in the storms of political debate" (Beck, 1999: 39). At the centre of sub-politics is the reflexive project of the self, a project constructed through expert knowledge systems of science, everyday 'lay' knowledge networks and community norms and beliefs. In some aspects, what comprises society today is a loose network of 'reflexive communities' confronting the consequences of modernity at the level of a 'sub-politics' (Beck, 1999; Lupton, 1999a).

To summarize, the risk society thesis is valuable for understanding spatial politics because it highlights the way the organization of society changes as society becomes more preoccupied with the side-effects of technological progress. The 'framework of manufactured uncertainty,' 'sub-politics,' 'reflexive modernization' and 'individualization' are valuable concepts for understanding how struggles over risky technologies play out in a social context.

The Cultural/Symbolic Perspective

Unlike Beck's emphasis on a new epoch and a distinction between traditional and modern societies, the second socio-cultural perspective to be taken up draws no such distinction. Rather it centres upon the essential components of social organization that serve to maintain order, security and the ideal society. This approach has been categorized as the cultural-symbolic approach to risk (Lupton, 1999). Theories within the cultural/symbolic category are situated further towards the subjective-constructivist pole than Ulrich Beck's risk society thesis (Lupton, 1999a). In this approach, Steve Rayner argues, "risks are defined, perceived, and managed according to principles that inhere in particular forms of social organization" (1992, 84). Cultural theories of risk differ from the individual approaches discussed earlier because instead of focusing upon the individual recipient of risk information, they focus on institutions and organizations (Rayner, 1992). It is the institutions and organizations that monitor what is going to count as information and what risks will be selected for attention and management. The central tenet of cultural/symbolic theory on risk is that people form patterns of social solidarities that reflect how they judge matters of trust, blame, fairness and accountability (Thompson et al., 1980). This body of theory owes much to the early work of Mary Douglas who through a series of anthropological studies sought to understand the relationship between concepts of purity, contamination and cultural boundaries (Douglas, 1966).

The primary theme of Douglas's early work is that at all times, in all places the world is moralized and politicized (Douglas, 1992). Douglas showed that processes of pollution, defilement, contamination and purification operate to maintain the social order by defining boundaries at various scales such as the community, the family and the body (Douglas, 1966). These ideas were eventually reapplied to the problematic of risk in so called 'modern societies' (Douglas, 1985, 1992; Douglas & Wildavsky, 1982). Central to Mary Douglas's work on the symbolic nature of purity, defilement and pollution is the connection between the human body and the 'body politic' (community of which it is a part of) (Douglas, 1966; 1992; Lupton, 1999). It was Douglas's assertion that notions of the body, in particular its openings and boundaries, relate to how societies maintain order and equilibrium in the midst of threats to their stability from contaminating and polluting objects, people, or practices (Lupton, 1999). The boundaries of the body and bodily control are reflected in how the boundaries of a society are maintained (Lupton, 1999). In this sense, ideas about pollution function to maintain the external and internal boundaries of community by policing the margins that differentiate insiders from outsiders, and center from periphery. As Lupton explains, "what is understood to be contaminating or polluting – and therefore as dangerous in the threat it poses to social order – is culturally specific, and works to establish and maintain ideas about self and Other" (1999, p. 3). This work has shown that risk can function as a diagnostic tool (Douglas & Wildavsky, 1982) or as a "conceptual stick for beating authority" that different groups use to lay blame or attribute responsibility (Douglas, 1992 p.10). These processes are dependant upon the group's underlying assumptions, values and attitudes towards order, hierarchy and a just society (Douglas, 1992).

Cultural/symbolic theories posit that risk perceptions are conditioned by the strength of a group's boundaries in relation to the rest of society and the scope of internal rules of prescription and differentiation within the group (Douglas, 1992; Rayner, 1992). Douglas and Wildavsky introduced a typology for this purpose called the 'grid-group' model (See Figure 2.2). The 'grid-group' model is a typology of social organization and views of nature. The *group* variable represents the "degree of social incorporation of the individual in a social unit"; its group ethos, and runs across a spectrum from individualist to collectivist (Rayner, 1992, 87). In cases where the group is weak, such as in competitive social organizations (the market), competitive individualism reigns and interaction is at a minimum. In cases where it is strong, collectivism reigns and there is a high degree of interaction amidst a number of activities. The *grid* variable describes the nature of the social interactions and its continuum runs from stratified to egalitarian. It is defined as a "measure of the constraining classifications that bear upon members of any social grouping" (Rayner, 1992, 87). These classifications include functions of hierarchy, kinship, race, gender and age. Low grid states correspond with egalitarian organizations where everyone is equal. High grid states correspond with high degrees of social stratification. Douglas and Wildavsky argue that particular categories (ex. high group-low grid) have unique relationships to risk perception and risk management (1982). High group and high grid organizations – complex groups and hierarchies - tend to adhere to norms and prefer strict regulatory control over risks by a central authority (hierarchy). In contrast, low group and low grid organizations – competitive individualists - tend to prefer little regulation and self-management approaches (market). Finally, high group and low grid organizations – volunteer groups, sectarians or communes – are particularly acute to low probability–high consequence risks (voluntary group). Using this grid/group typology, Douglas and Wildavsky distinguish between institutions with hierarchical and market traits at the 'center' and institutions with egalitarian values on the 'periphery' (1982). The role of the grid/group analysis is, as Rayner explains, "to provide a framework within which a cultural analyst may consistently relate differences in organizational structures to the strength of the arguments that sustain them" (1992, 90). In other words, it is one way to relate the arguments made over risk to the context of their origins.

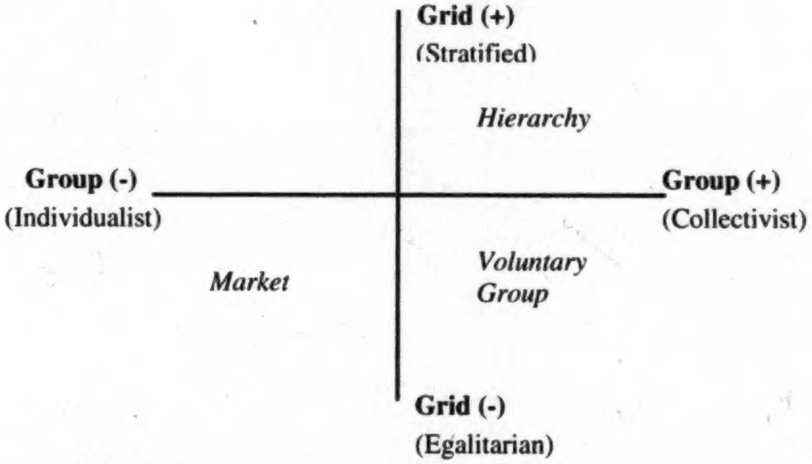

Figure 2.2 Grid/Group Typology (adapted from Douglas & Wildavsky, 1982)

In summary, the cultural/symbolic literature adds to an understanding of spatial politics by showing how patterns of social solidarity reflect shared understandings of trust, blame, fairness and accountability, all of which are indelibly tied to risk. Spatial politics take on a new form when interpreted through processes of pollution, defilement, contamination and purification. Especially so when scales such as the community, the family and the body are used to define its boundaries.

2.2.4 Summary: Living with Risk-Challenges to Moral Order

As industrial societies evolve, the concept of risk increasingly plays a formative role in 'ordering' the day-to-day experiences of individuals and of places. Several approaches exist for investigating the roles that risks play in shaping social life. Of these the 'Risk Society' thesis and the cultural/symbolic approach offer useful concepts for understanding the role risk plays in society. To date, there has been little examination of the convergences and differences of the work of Beck, Giddens, and Douglas despite the fact that many of their concerns and ideas overlap (Lupton, 1999). On the one hand, all approach risk as a socio-cultural phenomena. On the other hand, each entail different understandings of how risk influences subjectivity (Lupton, 1999). Where cultural-symbolic theory sees risk as a cultural response to transgression that is used to maintain concepts of selfhood and group membership, the 'risk society' thesis focuses on how reflexive awareness of risk has come to dominate everyday life, and how expert knowledge is increasingly employed by individuals thereby creating new forms of relating to self and others (Lupton, 1999). Regardless, spatial politics do not unfold on the head of a pin: they play out in places and spaces inscribed or 'ordered' by responses to danger and, consequently, moral beliefs and values.

2.3 Moral Geographies

The central theme of moral geography is that the construction, interpretation and representation of landscapes, locations and places are moral exercises (Adams et al., 2001; Birdsall, 1996; Buttimer, 1974; Matless, 1995, 1997; Sack, 1997; Smith, 2000; Tuan, 1986, 1989). In other words, cultural understandings of what is right or wrong, good or bad, better or worse, appropriate or inappropriate is embedded in and communicated through the social production of space and place (Smith, 2000). Territorial boundaries, landscape preferences, location criteria, and experiences of different places all reflect the morality of human life in a geographical sense (Sack, 1997; Smith, 2000). These understandings, or 'moral orders,' are often an outcome of power relations and can be approached through concepts of domination and marginalization, exclusion and resistance. Our landscape 'tastes,' siting decisions, and sense of place are all influenced by, and constitutive of, morally valued ways of life, which are themselves arenas of contestation.

Geographers have shown that the morality of human life is geographically situated (Tuan, 1986, 1989, 1991). As the diversity of landscapes and places attest, there are many different ways of 'being-in-the-world' (Matless, 1994). The literature on 'moral geographies' acknowledges the world of difference we live in, one in which multiple moral projects exist at varying scales that intersect and sometimes conflict. In recent years, geographers interested in moral issues have taken several different approaches (Birdsall, 1996; Philo, 1991; Smith, 2001). For the purposes of this thesis, studies of how the social production of space, or 'spatiality,' is tied up with varying understandings of 'morality' will be considered (Cosgrove, 1993; Daniels & Cosgrove, 1993, Duncan & Duncan, 1988; Knopp, 1992; Laws, 1994; Pile & Keith, 1997; Tuan, 1989). This includes how the social construction of risk, places and landscapes reflect, and reproduce moral beliefs. This idea is important to this thesis because as the previous discussion touched on, conflict around risk is a topic that invites moral interpretation.

2.3.1 Spatiality and Morality

Spatiality is a term used to describe the socially constructed and material nature of space (Harvey, 1989; Lefebvre, 1991; Soja 1989, 1996; Shields, 1991). Spatiality has a dialectical quality: it is a material product but is also dynamically creative (Gleeson, 1999; Soja, 1980). It is both produced socially and socially producing. The process of producing spatiality or 'making geographies' begins with the body as a spatial entity and the performance of the self in relation to its surroundings (Soja, 2000). At the same time, however, the collectivity of socially produced spaces within which we live shapes our subjectivity and performances (Soja, 2000). Understanding space through the lens of spatiality requires one to let go of the interpretation of space as a passive 'Newtonian' backdrop to history and re-approach it as fully implicated in the unfolding of social life (Soja, 1989, 1996). Henri Lefebvre offers a thorough exploration of how spatiality unfolds (1991). Lefebvre was disenchanted with the traditional way of approaching space as either absolute, material reality or abstract, idealist construction. He was, however, not ready to disregard these approaches altogether (Soja, 1989, 1996). Lefebvre replaced the conceptual dyad of objective-subjective space with the conceptual triad of spatial practice (perceived space), representations of space (conceived space) and spaces of representation (lived space) (Harvey, 1989; Lefebvre, 1991; Soja, 1989, 1996; Simonsen, 1996). David Harvey offers a description as follows:

- Spatial Practice (perceived space) – "the physical and material flows, transfers, and interactions that occur in and across space in such a way as to assure production and social reproduction" (1989: 218).
- Representations of space (conceived space) – "the signs and significations, codes and knowledge, that allow such material practice to be talked about and understood" (1989: 218)
- Spaces of representation (lived space) – "mental inventions (codes, signs, 'spatial discourses,' utopian plans, imaginary landscapes, and even material constructs such as symbolic spaces, particular built environments, paintings, museums, and the like) that imagine new meanings or possibilities for spatial practices" (1989, 218-219).

All three 'moments' are interdependent and overlap to produce spatiality. Worlds are simultaneously objective domains (perceived space), coded through shared representations (conceived space) that are in turn used and resisted through lived experience (lived space). The triad above grants access to a 'third space': an encompassing life-world of individual and collective experience that resist the dominant, essentializing vision of perceived and conceived space (Soja, 2000). Third spaces are simultaneously real and imagined and are approached as terrains of resistance or counter-spaces, to the dominant socio-spatial order (Keith & Pile, 1993; Pile & Keith, 1997; Soja, 1996).

Place, location, locality, landscape, environment, home, city, region, and territory all compose and comprise the inherent spatiality of human life (Soja, 1996). Place and landscape are two concepts relevant to the study of environmental risk because they are the settings for the intersection of places of meaning and risky technologies. 'Place' is a concept used to describe material locations invested with human meaning (Entriken, 1991; Sack, 1997; Tuan, 1974). Place can be understood as a location with specific relations to other points in space, the general context or locale for social relations, or in regards to its subjective sense of meaning (sense of place) (Cresswell, 1996). The boundaries of place are elastic. An armchair, the body, a shopping center, a city, even a state are all places. The 'landscape' concept is used to describe the visible surface of the earth (Mitchell, 2000; Smith, 2000; Duncan & Ley, 1994). Like place the scale of landscapes vary but less so since landscapes are premised upon the distance the eye may see. 'Landscape' is a way of seeing and structuring the world, literally and figuratively (Mitchell, 2000). Landscapes are important because they frame the social imaginary through their material production and symbolic representation (Mitchell, 2000; Peet, 1996). As Mitchell states, landscapes are key to social regulation:

> Landscapes are particularly important ingredients in social regulation because they are the places where discourse and material practice meet – where acts of representation (about what constitutes the "good life," for example) and the material acts of living (working, consuming, relaxing) inevitably intersect (2000, p.g. 143).

Places and landscapes are social products and communicate power through their ability to order (classify, differentiate, naturalize) social relations and moral beliefs (Mitchell, 2000). They play an integral role in the performance of identities and the framing of dominant social life and values (Duncan & Duncan, 2001).

The linkages between moral codes (shared assumptions of right and wrong) and particular landscapes and places have been a constant interest for past and contemporary geographers (Tuan, 1989; Smith, 2000; Duncan & Ley, 1994; Barnes & Duncan, 1992). The central proposition is that spatiality and moral order are dialectically related: places and landscapes reflect and actively reproduce moral orders. Of the work examining the linkages between morality and the physical and cultural landscape, several examples stand out. These can be differentiated in two ways: literature exploring how a particular landscape or place is an embodiment of the dominant moral order, and literature highlighting how places and landscapes are used to resist dominant moral principles (Johnston, 2001).

2.3.2 Normative Geographies

Places and landscapes embody dominant moral orders - a process Tim Cresswell has called 'normative geographies' (1996). The normative landscape describes the "way in which ideas about what is right, just, and appropriate are transmitted through space and place" (1996, 8). Cresswell argues that moral order is not inherent in any space or place but must be created, reproduced and defended from heresy (1996). In this way, locations, landscapes and places foreground our moral evaluations of actions: "the geographical setting of actions plays a central role in defining our judgment of whether actions are good or bad" (Cresswell 1996, 9). We often judge things as right or wrong depending upon if they are in or out of place, and in doing so we participate in 'ordering' places and landscapes. As such normative geographies reflect the dominant political, social and economic order.

The 'ordering' of places and landscapes as normative geographies takes place through processes of classification, differentiation and naturalization (Cresswell, 1996). Normative geographies are comprised of divisions of space (classification) that are meaningful in relation to their opposites (differentiation) and are often placed in the realm of the natural (naturalization) (Cresswell, 1996). Cresswell's concept of normative geography builds upon and complements similar work in social and cultural geography. Tuan has showed how landscape classifications (divisions of space) of the city, country and garden reproduce dominant assumptions of right and wrong, good and bad (1989). Tuan has also showed how varying imaginative landscapes, such as those constructed in children's fairy tales, influence perceptions of risk and natural hazards (1979). Duncan examines the urban form of the early 19th century Kandyan Kingdom and demonstrates how the landscape of the city is an important part of the practice of power (1992). Duncan and Duncan argue the aesthetic attitude towards 'natural' landscapes is a moral order that veils exclusionary spatial practices based largely on class (2001). Finally, Gesler shows how certain landscapes imbued with physical, mental and spiritual healing powers reproduce moral orders regarding health and well being (1993).

Attempts at naturalizing systems of meaning through spatial practice can involve demarcating in space what belongs and what does not. In such cases, moral geographies often take the form of geographies of exclusion, the starkest examples being Nazi Germany or apartheid era South Africa (Sibley, 1995; Smith, 2000). To understand such practices, Sibley employs a psychoanalytic approach to examine the construction and maintenance of the geographies of exclusion of marginalized groups (1995). Sibley argues that the spatial exclusion of those defined as 'different' is part of *unconscious* processes of 'purifying the self' (1995). Sibley (1995) employs a number of alternative approaches to theorizing the 'self' such as object-relations theory (the social and material world constitutes the 'self'), the concept of abjection (those objects, people or places that disrupt the boundaries of the 'self') and the 'generalized Other' (the social positioning of oneself in relation to others). Sibley and others argue that the 'self' is purified and made whole by controlling social and spatial boundaries ('boundary maintenance'), purifying spaces and labeling others who threaten the dominant moral order (Cresswell, 1996; Sibley, 1995; Wilton, 1998). In this sense, spatial boundaries are moral boundaries.

Normative geographies, complete with their moral boundaries, aspire to resemble 'utopias.' Utopias are ideal places (Bonazzi, 2002; Foucault, 1986; Heatherington, 1998; Soja, 1996). Utopias have always been a fixture of myths, legends and folktales, and, with tragic consequences, dreams of perfect societies. While utopias do not exist, 'utopics' are the real places created through normative geographies and are associated with the translations of a good society into spatial practice (Heatherington, 1998).

> Utopias do not exist; what exists are the translations of ideas about the good life and about social and moral order into social reality, and that reality takes on a distinctly spatial character as it comes to be represented in particular representations of space (Heatherington 1998, 334).

These are the spaces – thirdspaces – where representations of the 'good' society and its moral beliefs are 'ordered', and always resisted. Such places and landscapes are produced and encountered everyday whether during a trip to the mall, a vacation to Disneyland or as I argue, within arenas of risk conflict.

2.3.2.1 The Country Place Ideal

An important moral geography and utopic relevant to this study is the countryside in late-capitalist societies. As of late, the 'countryside' has become a potent symbol of the 'good' of civilization (Bunce, 1994; Ching & Creed, 1997; Duncan & Duncan, 2001; Cloke & Little, 1997). It is most often associated with characteristics such as true community, tradition, harmony, peacefulness, nature and fulfillment (Bunce, 1994). Bunce has traced the emergence of such pro-countryside sentiments with the rise of urban-industrialism in the late 19th century (1994). The 'idealization' or 'sentimentalisation' of the countryside was shaped by the transformation of the economies of the rural and the urban, and through the accompanying philosophical, aesthetic and social responses to urbanization (Bunce, 1994). The 'country place ideal' – equating the rural with elements such as agriculture as spectacle, nature, picturesqueness, community, peace and quiet, and tradition - emerged as a reaction to the rise of urban-industrial systems (Bunce, 1994; Jones, 1996). In this sense, it has developed in opposition to images of the city (Bunce, 1994; Ching & Creed, 1997). Duncan and Duncan (2001) describe the country 'idyll' as:

> an aesthetic retreat from the perceived impersonality of modern mass society and from the psychologically unsettling processes of globalization by which social relations are increasingly dissembedded and reconnected into complex and heterogeneous networks of abstract social and economic relations (387).

The 'countryside' gains its potency from its juxtaposition with the noisy, dirty, dangerous, fast paced, 'global' city. In Britain the countryside landscape has taken the form of an aesthetic amenity where as in North America, the countryside is valued as more of a symbol of agricultural progress and bygone lifestyles (Bunce, 1994).

The distinction and relationship between the city and the country constitutes an important spatiality infused with morality and with implications for identity construction (Ching & Creed, 1997; Williams, 1973). Ching and Creed point out that the rural/urban distinction underlies many of the power relations that shape the experiences of people in nearly every culture (1997). People 'live out' the rural/urban distinction through their choice of clothes, music, and behaviors (Ching & Creed, 1997). In this way, distinctions between the country and the city play a role in social identification. They are not merely backdrops for social action but play an active role in the performance of social identities and framing of values within a community (Duncan & Duncan, 2001). Furthermore, the moral dimension of the rural/urban distinction is clear when one examines how the rural is judged in relation to the urban. The rural occupies a dual cultural position in modernity. It is often associated with backwardness or 'hicks' and at the same time it is the idealized location of country homes and cottages. Ching and Creed convincingly argue the rural is valued and at the same time devalued in comparison to the urban (1997):

> The ideal country is the place where urbanites visit, not the place where poor people eke out a living. Urban dwellers who are free from the stigma of rusticity can wax eloquently about the countryside or embrace it as a retreat without undermining their own cultural superiority – *going* to the country with a fully formed urban identity is not the same as *being from* the country (Creed & Ching, 1997, 20, emphasis in original).

Creed and Ching point out that the idea of a country home implies that the owner is an urbanite. A person who would choose to move to the country and completely reorient their lifestyle is often perceived as 'counter-cultural' (Creed & Ching, 1997). Duncan and Duncan have demonstrated how in some cases, the 'rural idyll' can function as a 'positional good' that operates to the exclusion of others (2001). A positional good is something that can be consumed to symbolize ones place in society.

2.3.3 Geographies of Resistance

Just as the spatiality of landscape and place can be 'ordered' to promote or reflect moral beliefs and values, they can also be used to challenge them (Cresswell, 1996). Spatiality is always a site of struggle and resistance (Cresswell, 1996; Mitchell, 2000; Pile & Keith, 1997). It is both a contentious product of society and an arena of conflict (Gold & Revill, 2000). 'Moral orders,' are not constructed in a vacuum and are often an outcome of power relations and thus can be approached through concepts of domination, marginalization, exclusion and resistance. Routledge defines resistance as "any action, imbued with intent, that attempts to challenge, change or retain particular circumstances relating to societal relations, processes and/or institutions" (1997, 70). Resistance involves conditions of domination, exploitation, and subjection at the material, symbolic or psychological level (Routledge, 1997).

The literature on the spatiality of resistance inquires into (1) how spatial practice influences the character and emergence of resistance, (2) how resistance is strategic when it comes to using space, and (3) how the meaning of places and landscapes can be transformed through acts of resistance (Routledge, 1997). Indicative of resistance, understood through the lens of social spatiality, are the points, moments, surfaces or events – the locations of struggle – around which people are mobilized (Keith & Pile, 1993). Locations of struggle involve both a sense of where one is in the world, itself a moral question, but also a definition of where – literally and figuratively – the struggles are to be fought (Keith & Pile, 1993). In defining these political spaces, boundaries are constantly being emplaced and repositioned and spaces are re-symbolized through strategic acts of *territorialization* (Cresswell, 1996; Keith & Pile, 1993; Pile & Keith, 1997). Territorialization is the act of assigning people or groups to places by drawing boundaries. The 'homeplace' is an important territorialization when it comes to resistance (Hooks, 1984, 1990; Soja, 1996). Homeplaces mark the division between private and public spaces and typically are the spaces that are free from domination, subjugation and exploitation (Hooks, 1984, 1990; Soja, 1996, Poletta, 2001). Homeplaces (sometimes called 'free spaces') are simultaneously at the center and margins of political struggles

(Soja, 1996). Such places often provide the spaces for political alliances or communities of resistance (Keith & Pile, 1993). A kitchen table, a church or a nation imagined as the 'homeland,' can all function as homeplaces in one way or another. Another important site of resistance is the body. Bodies are made and remade as individuals reproduce or resist power (Butler, 1990; Foucault, 1979).

Often the moral boundaries of normative geographies are revealed when an object, person or behavior is seen as out of place (Cresswell, 1996). In examining normative geographies, Cresswell has focused upon the ways that defining people or things as out of place can be interpreted as spatial transgression (1996). Cresswell offers the theme of transgression as a lens through which one may examine how normative geographies are challenged through alternative spatialities. Instances of transgression – the use of place and space that challenge the dominant moral order - are sites where ideology is fixed in space. Subversively altering existing landscapes or places (e.g. graffiti), creating alternative landscapes or acting out of place, creates 'heretical geographies,' that challenge dominant moral orders (Cresswell, 1996).

Analysis of such cases, Cresswell argues, can grant insight to the margins of society and can speak to understandings of 'normality' (1996). For example, Ley argues that the landscape of cooperative housing projects in Vancouver, Canada embody moral principles of community that run counter to neo-liberal planning strategies (1993). Watts explores the politics of oil in Nigeria by exploring the resistance of two groups against 'despotic petrolic capitalism': one group resisted the moral decay of Islam, the other minority rights and self-determination (1997). Both tried to construct local communities and identities as part of their struggle.

The consideration of space as a formative dimension in the social construction of risk is often left out of scholarly examinations of risk politics. For example, Walsh (1988) has examined the local struggle of residents against officials after the Three Mile Island accident. He found that obtaining assistance from outside sources, distrust, and target vulnerabilities are important variables for the survival and longevity of groups. Gerlach

(1992) has explored public disputes between authorities and protest groups over the development and deployment of 'hazardous' technologies pointing out that organization, recruitment, commitment, ideology, and perception of opposition contribute to successful movements. Finally, Baxter et al. has uncovered how the siting process for an underground waste facility challenged nearby residents 'core values' such as health, trust and safety (Baxter et al. 1999). What these examples miss, however, is that space is not a passive backdrop or container to these processes but is fully involved and contributes to how they unfold. The moral dimensions of spatiality can often open up or close down possibilities for resistance.

2.3.4 Summary

The literature on moral geographies is relevant to this study because spatial politics unfold in places invested with moral meanings. As important as themes such as knowledge, trust, ideology and resources are for understanding risk issues, by not considering how the social production of space figures into their construction, interpretations never reach their full potential. An understanding of how the historical, sociological and geographical settings of risk politics constitute their trajectories is critical for interpreting related experiences. To summarize the wide swath of literature presented under the title 'moral geographies' I have condensed it into the following five summary points:

- *Socio-Spatial Order* defines how every society produces its own order through places and landscapes;
- *Places* and *landscapes* are produced socially and are socially producing and can be studied as a set of materialized spatial practices (perceived space), mental or ideational fields (conceived space) and individual and collective life-worlds (lived space);
- *Places* and *landscapes* are 'ordered' (classified, differentiated and naturalized) and can involve demarcating in space, through spatial exclusion, what belongs and what does not;
- *Ordering* is often premised upon schemes of normative evaluation such as moral beliefs; and

- *Ordering* is political and challenged through resistance in particular places.

The following section explores the process of 'ordering' by exploring the role of storytelling in mapping the main coordinates of moral geographies: community, identity and place.

2.4 Stories, Identity, Community and Place

Telling stories is a fundamental way we construct our identities, our communities and the places where we live (Bruner, 1986; Finnegan, 1997; Hinchman & Hinchman, 1997). All are moral constructions, and come into being through the formative power of storytelling (Hinchman & Hinchman, 1997; Tuan, 1991; Smith, 2000). A moralizing impulse is present in all narrative accounts and in all landscapes and places (Becker, 1997; MacIntyre, 1984; Sack ,1997). Storytelling, in its various forms, represents the attempt to articulate morally valued ways of life. Telling stories is one way we socially construct our identities, communities, and places (Berger & Luckmann, 1966; Bruner, 1986; Hinchman & Hinchman, 1997). Storytelling is important for this research because it represents an important 'moral discourse' through which identity, community and place are constructed and spatial politics are expressed. This review examines the moral nature of stories and how they construct aspects of identity, community and place.

2.4.1 Storytelling as a Moral Discourse

Narratives figure prominently in the ways we illustrate, test and live out our moral theories and principles, and in so doing, they do moral work (Nelson, 2001; Frank, 1995; Becker, 1997; MacIntyre, 1984). They are a means to achieving a moral end because they (Nelson, 2001):

- Teach us our duties (MacIntyre, 1984; Naussbaum, 1990);
- Guide and motivate morally good action (MacIntyre, 1984; Nussbaum, 1990; Rorty, 1989);
- Provide moral justification for actions (MacIntyre, 1984);
- Foster our moral sensibilities (Naussbaum, 1990);
- Enhance our moral perceptions (Naussbaum, 1990);
- Make actions or persons morally intelligible (Frank, 1995; Nelson, 2001); and they

- Help reinvent ourselves as better persons (Frank, 1995; Becker, 1997; Nelson, 2001).

Numerable theorists have articulated particular narrative approaches to moral life (MacIntyre, 1984; Taylor, 1989; Rorty, 1990; Naussbaum, 1990; Nelson, 2001). A narrative approach to morals asks four questions (Nelson, 2001). First, what is done with the story? Second, what kind of story is used? Third, who is employing the story? And finally, why is this done?

Numerous theorists and philosophers have posed these questions in an attempt to further our understanding of moral life (MacIntyre, 1984; Taylor, 1989; Rorty, 1990; Naussbaum, 1990; Nelson, 2001). Alisdair MacIntyre claims that narratives are central to our moral agency – our ability to be good people. MacIntyre contends that we are 'story-telling creatures,' who in a quest to live out the 'good life,' model our lives after the shared stories that exemplify what we see as good and right (MacIntyre, 1984). It is these shared, communal stories that develop our capacity to see things as good, appropriate, valuable or reasonable. From this point of view, our actions are only intelligible within the context of the foundational narratives of the community to which we belong. In an effort to be 'good,' citizens must model themselves after the shared narratives of the community (Nelson, 2001). Furthermore, citizens retell stories to justify the decisions they make as they strive to be 'good' people. Bellah et al. (1985) have used MacIntyre's (1984) ideas to conceptualize what they call a 'community of memory.' A 'community of memory' is a group linked by a common past (Bellah et al., 1985; Couto, 1993). People often tell stories about the past to build moral communities in the present. Bellah et al. suggest that the 'community of memory' nurtures individuals by carrying forward a moral tradition that reinforces the definition and aspirations of the group (Bellah et al., 1985; Couto, 1993). The telling and re-telling of stories provides examples of commendable individuals who embody the meaning of the community and this in turn carries the community forward (Bellah et al., 1985; Couto, 1993).

Similarly to MacIntyre, Charles Taylor (1989) argues that narratives play an important role in making sense of one's actions and where these actions are positioned in a 'moral space.' Taylor uses the metaphor of the 'moral space' to describe the frameworks that define the shape of the 'good' and the way these orient our relation to this good (Taylor, 1989). Taylor defines 'moral spaces' as a "space in which questions arise about what is good or bad, what is worth doing and what not, what has meaning and importance for you and what is trivial and secondary" (1989, 28). From Taylor's point of view, our sense of self is linked to our sense of the good and self-understandings arise through the discovery of one's orientation to the 'good' or 'morally valued way of life' (Taylor, 1989). As we strive to give our lives meaning we assemble our sense of self and this means we understand ourselves in narrative form as a 'quest' or 'journey.' For Taylor, the moral purpose of storytelling is to make sense of who we are (Nelson, 2001).

Nelson, however, points out several problems with these approaches (2001). First, invoking the stories our community provides us with raises issues around inclusion and exclusion. Some communal versions of stories may not recognize experiences that the dominant culture has marginalized and subordinated (Nelson, 2001). Those on the margins may not be able to invoke communal narratives because their definitions of the 'good' differ from that of the dominant culture. Second, enacting the story of our quest for a good life, or otherwise put, "understanding ones life as a unified story of a quest for the good," is problematic because it presupposes that lives are best understood as a unified narrative with a linear plotline with one mode of emplotment: the quest narrative (Nelson, 2001: 62). Narratives are not always unified and there are more plotlines than the quest narrative. This is illustrated in the work of Arthur Frank who has identified three story lines - the quest, chaos and restitution narratives - that are invoked and enacted by individuals dealing with illness (1995).

Nelson (2001) offers an alternative approach that addresses some of the limitations in the work of MacIntyre and Taylor by introducing the idea of the counter-story. A counter-story sets out to shift a shared but oppressive identity. It does so by identifying the oppressive master narrative and articulating how it is disempowering. If it is successful, the person who was oppressed may be seen as someone who is worthy of moral respect. This re-identification also contributes to a person's freedom to act - their agency - because moral respect is a necessary prerequisite for the free exercise of moral agency (Nelson, 2001). Nelson's counter-story is returned to later in Chapter Three in a discussion of the methods used in this research. The following literature on narrative provides a convincing case for the role narratives play in shaping peoples lives, communities and places.

2.4.2 Storied Lives

People organize their lives through narrative, and in so doing, the 'self' is formed through what is being told (Finnegan, 1997; Gergen & Gergen, 1997; Denzin, 1988; Miller, 2000). When communicating who we are, who we want to become, where we have come from, or where we want to go, we regularly use stories. We often employ these stories in the first person during conversation. Others sometimes tell such stories about us. These stories, however, are more than straightforward reflections of how we see ourselves: they are constitutive of our identities. As our stories change, so do our identities. From the point of view of MacIntyre, each human life is a narrative possessing 'unity' (MacIntyre, 1984). Dorothy Nelson states, "Personal identities consist of a connective tissue of narratives - some constant, others shifting over time - which we weave around the features of ourselves and our lives that matter most to us" (2001, 72). A view of the self as storied - formulated and experienced through self-narratives - approaches personal stories as not so much a reflection of life, but rather one way of constructing life as a unified whole (MacIntyre, 1984). To a certain extent the self is 'a reflexive project' that is constructed through telling and resisting stories (Giddens, 1991).

One way this reflexive project is accomplished is through autobiography. Autobiography is a narrative structure that is used to make sense of life (Denzin, 1988). An autobiography describes the way in which people articulate how the past is related to the present (Denzin, 1988; Coffey & Atkinson, 1996). It is a form of 'reflexive monitoring' whereby we reflect upon the past to alter the present in its light or alter the past in the light of the present (Frank, 1995; Bruner, 1987). Our lives cannot by themselves take on the form of stories. We regularly chronicle our lives in terms of a series of events, happenings, influences, and decisions (Coffey & Atkinson, 1996).

Through the selective, depictive, interpretive, and connective features of stories we make clear the temporal sequence of spatially located acts, experiences, and relationships that constitute our lives (Becker, 1997; Nelson, 2001; Clandinin & Connelly, 2000). As Nelson reiterates, "We have to make it a story, and we do this by selecting incidents and themes from the minutiae of our existence and explaining their importance by how we represent them in narrative form" (2001:). These 'self-stories' are the self's 'medium of being' (Frank, 1995; Schafer, 1981). They are not told just for description; the self is being formed in what is being told (Frank, 1995). By organizing lives and experiences through 'self-stories', social actors make sense of them.

Although 'self-stories' are personal, they utilize a range of culturally defined conventions. Ruth Finnegan states, "personal stories are culturally developed resources which - like language - people can draw on, manipulate and enact in the creation and experience of their storied lives" (1997, 77). In telling 'self-stories' we invoke storylines made available by our culture. By employing culturally specific plotlines, our stories are intelligible to others in our culture because they contain familiar moral precepts. In this way, 'self-stories' can be approached as 'cultural documents' that reflect and disseminate embedded moral beliefs and expectations (Becker, 1997).

2.4.3 Storied Communities

Just as 'selves' are storied through the enactment of narratives, so are communities. Communal narratives provide a foundation for selves to form (in the sense described above) and come together with others (Hinchman & Hinchman, 1997; Johnstone, 1990; Fisher, 1997; Maines & Bridger, 1992). The term community has been innumerably defined across the social sciences (Silk, 1999; Jablonsky, 1993; Bell & Newby, 1976). However, three basic elements - social ties, social interaction, and area (Hillary, 1955) - have persisted throughout the debate (Smith, 2000). A most basic definition of community is a "social network of interacting individuals, usually concentrated in a defined territory" (Johnston, 2001, 101). In the social sciences, it is generally agreed that the grounds for the constitution of community is some kind of social network (Silk, 1999; Smith, 2000; Hillary, 1955). These networks are either place-based (they have some sort of territorial basis) or are 'stretched out' (spatially dispersed) (Silk, 1999). In general the concept of community presupposes elements such as common needs and goals, a sense of the common good, shared lives, culture and views of the world and collective action (Silk, 1999).

Early work in sociology differentiated two types of communities: those based on the 'mechanical solidarity' of kinship ties, and close social relationships (gemeinschaft) and those based on the 'organic solidarity' emerging out of the rational, efficient and contractual social and economic relationships indicative of urbanization and industrialization (gesellschaft) (Tonnies, 1963). Urbanization, with its informal social relations, was thought to be the antithesis of any meaningful community and was often counter-posed to the traditional ties characteristic of rural places (Tonnies, 1963; Durkheim, 1951; Simmel, 1969; Wirth, 1969). The trend towards suburbanization saw communities transformed into locally-based independent sub-groups or 'communities of limited liability' (Janowitz, 1967). This "collective attempt to live a private life" (Mumford, 1940: 215) is often labeled the 'community lost' perspective (Knox & Pinch, 2001). Suburbs are spatially and socially structured to allow for privacy and separation, a fact that influences how social control is negotiated in these places. When it comes to social control, the dominant moral order in the suburbs is that of 'moral minimalism' (Baumgartner, 1988). Moral minimalism stands for the weak social ties in suburban communities, places where "life is filled with efforts to deny, minimize, contain, and avoid conflict" (Baumgartner, 1988 p. 127). Only in cases where suburbanites can be anonymous and certain that an outside authority will step in to mediate a conflict will they endorse the exercise of social control (Baumgartner, 1988).

In contrast, other work has shown that the city is an inherently social place (Ley, 1983; Jacobs, 1961). Within urban environments are distinctive social worlds sustained by a mutuality of feeling and purpose (Liebow, 1967; Suttles, 1968; Ward & Zunz, 1992). Human associations via affective bonds foster 'communality' (Bell & Newby, 1976). Communality is cultivated through the articulation of interpersonal bonds fashioned through a shared history (historical heritage), ideals of loyalty (group identity), and relations of interdependence and reciprocity (mutuality) (Selznick, 1992; Smith, 2000). Often 'communality' arises when a community is threatened and it is only then that notions of community belonging become conscious (Bell & Newby, 1976). In such cases, where territorial exclusiveness or morally valued ways of life are challenged 'crisis communality' may arise (Knox & Pinch, 2001). This approach has been labeled the 'community found' perspective (Knox & Pinch, 2001).

'Communality' is not necessarily place-based: it does not always occur in some well-defined area (Davies & Herbert, 1993; Silk, 1999). Sometimes communities are 'chosen' by individuals residing in different places in an effort to reconstitute various parts of their identity (Friedman, 1992; Nelson, 2001). Such networks of interrelationships are sometimes 'stretched out' over spaces and are relatively place-free (Silk, 1999). For example, Internet or virtual communities have proliferated as technology spreads and individuals find others with mutual interests and experiences.

Apart from the social ties and places that often define communities, there is another important variable that fosters community. Communities rely on communication to facilitate social interaction (Fisher, 1997). Communities share a way of talking - a discourse - that facilitates and sustains the interpersonal relationships that form the grounds of the community's constitution. In this way, communities can be thought of as discourse communities or 'speech communities' (Fairclough, 1995; Duncan & Duncan, 1988). As was the case with identity and the 'self,' however, discourse does more than reflect definitions of community; it is actively involved in the construction of 'communality' (Fisher, 1997; Maines & Bridger, 1992; Johnstone, 1990). Discourse constructs 'communality' by reaffirming norms of behavior and defining roles for its members. Fisher has identified three types of community stories whose function is to preserve and sustain the community: affirmative rhetoric, purification rhetoric, and subversion rhetoric (1997). Affirmative rhetoric is designed to promote community solidarity and unity in accordance with a new or old idea. Purification rhetoric is designed to erase past aberrations or violations of norms in the community. Subversion rhetoric is designed to undermine rival stories about alternative ways of understanding the community.

No type of talk is more indicative of the formative power of discourse than narrative. Communities are intrinsically storied (Maines & Bridger, 1992; Fisher, 1997; MacIntyre, 1984). A community's culture is the story its members tell to make sense of the different pieces of their lives. 'Community-stories,' rather than belonging to one person, belong to groups defined by a mutuality of interests and feelings (Johnstone, 1990). Community stories have a shared nature of authorship. Erving Goffman (1981) proposes that any utterance involves three roles. The author is the person who has put the story together, the animator is the person performing the story and the principal is the person who is committed to what the words say (Johnstone, 1990). Community-stories are collectively authored and in telling them we play the role of animator and principal. These last points are directly connected to the philosophy of Alisdair MacIntyre presented earlier. When we share stories we are not only the teller (animator) but we are also committed to the values or morals that the story functions to illustrate (principal). The narrative tradition of a community shapes the way members see themselves and others in the present and the future.

2.4.4 Storied Places

Understanding the interrelationship between place and narration necessitates the invention of a 'poetics of geography': an approach for investigating the metaphors and narrative strategies that we use to talk about space (Yaeger, 1996). This requires a rhetoric that can unravel place-centered narration. In Human Geography 'place' has a unique connotation. It stands for the bounded settings in which social relations occur and identities are forged (Tuan, 1977; Kearns & Gesler, 2001; Entriken, 1991; Relph, 1976; Cresswell, 1996). It is often associated with terms such as 'sense-of-place' (sentiments of attraction and un-attraction to places) and 'place-attachments' (interrelationships or dependencies with place) (Tuan, 1977; McDowell & Sharpe, 1997; Relph, 1976; Daniels, 1992). Places are storied in the way they are recreated through the social act of storytelling. Casey eloquently defines place as, "the immediate ambience of my lived body and its history, including the whole sedimented history of cultural and social influences and personal interests that compose my life-history" (2001, 404). The identity of place is always being produced as its past is reconstructed and its future is imagined.

Developing a sense of place often entails coming to understand 'place-stories' (Tuan, 1991). 'Place-stories' are stories that describe geographical places. Places resonate with stories and stories often come to represent places (Johnstone, 1990). Michel de Certeau states, "every story is a travel story – a spatial practice" (1984, 115). By this he means that as we tell stories we organize places, and link them together (de Certeau, 1984). Such discourse is integral to the social construction of place (Tuan, 1991; Peet, 1996). Place-names evoke stories that happened in those places and they often remind us of moral lessons (Johnstone, 1990). For example, places such as Chernobyl, Auswitzch, or the 'Twin Towers,' all conjure up stories that have meaning within some type of moral discourse. In so far as communities are sometimes territorially defined, 'place-stories' and 'community-stories' are interlinked.

Several studies have examined the way 'senses of place' are recreated in storytelling (Johnstone, 1990; Basso, 1984, 1988; Tuan, 1991; Entriken, 1991; Peet,1996). Tuan examines the creative power of naming places and how such processes make or unmake places in a moral dimension (1991). Place names evoke stories, often community-stories, and can be positive or negative, moral and political (Tuan, 1991). Keith Basso has explored the ways in which places and stories are interweaved in Western Apache culture (1984, 1988). Barbara Johnstone traces how reports of natural disasters came to be a story and how that story came to represent the city of Fort Wayne (1990).

Nicolas Entriken (1991) has argued that narrative is one way of achieving both 'insider' and 'outsider' understandings of place. By 'insider' Entriken is referring to subjective, centered 'authentic' understandings of place (Relph, 1976). An authentic sense of place is the unselfconscious sense of belonging one has to a place (Relph, 1976). By 'outsider' Entriken is referring to objective, decentered or 'inauthentic' understandings of place (Relph, 1976). An inauthentic sense of place is the result of a casual or superficial attachment to place (Relph, 1976). Entriken contends that we use both 'insider' and 'outsider' perspectives when communicating and making sense of places. He describes this as the 'betweenness' of place (1991). Stories encapsulate the 'betweenness' of place by simultaneously communicating subjective experiences and objective understandings of what and where places are (Entriken,1991).

2.4.5 Summary

In summary, how we see our lives, our selves, our communities, the places where we live, and how we should live are all communicated through acts of narrative reconstruction. Taking into consideration narrative's formative power, storytelling does more than reflect these dimensions; it is actively involved in reproducing them and their dominant moral orders. Social life involves *evoking* communal narratives about identity, community and place. What's more, we *enact* these narratives in our day-to-day lives as we strive to live good, moral lives: "through our everyday interactions, we trace the moral geography of our lives" (Birdsall, 1996, 620). In the context of spatial politics in general, and sour gas politics in particular, this understanding of narrative is relevant because the politics of NIMBY movements is simultaneously a space for the construction of identity, community and place, an opportunity to tell stories, and a struggle over the moral value of risky technologies.

2.5 Chapter Summary

This chapter has traced how individual and societal responses to the unintended consequences of development are increasingly articulated through the concept of 'risk.' Despite the objective connotations of the term, 'risks' still beg moral evaluation. Furthermore, responses to risk entail 'ordering' bodies, places, landscapes, and environments and such 'orderings' are recognizable in the identities we perform, the communities we claim membership to and the places we inhabit. Given that risks are always politicized and moralized, associated socio-spatial 'orderings' of identity, community and place amount to unique and particular 'moral geographies.' As researchers, we can understand the construction of moral geographies by listening to the stories through which their constituents of identity, community and place are constructed.

How one can theoretically and methodologically approach such stories and analyze them is discussed in the following chapter.

3 METHODS

3.1 Introduction

Chapter Three presents an overview of the methodological approach used in this study. The aim of this study was to explore the spatial politics around sour gas development in two Alberta communities by reconstructing the personal experiences of local residents who mobilized to stop the siting of two sour gas facilities. The objectives were to retrace the events of each case, examine how participants rationalized their NIMBY politics, and adapt a conceptual framework for understanding both NIMBY movements. This thesis takes the position that experience is comprised of "narrative fragments enacted in storied moments of time and space" (Clandinin & Connelly, 2000). As researchers we can understand the experiences of others by listening to their representation as narratives. Therefore, in this study, narrative is both the object and method of analysis. Thus it is important to interrogate narrative theoretically as a phenomenon and methodologically in terms of how we find and interpret stories.

The chapter begins with a general overview of qualitative research methods in Human Geography. The aims, practices and challenges of qualitative work are briefly summarized. Following this, an overview of the research approach, namely, a constructionist approach to discourse and its role in the formation and reproduction of everyday geographies[11], is presented. The social constructionist paradigm, discourse analysis and narrative analysis are explained and connections are drawn between the three. Next, the study design is outlined with specific attention given to case study and snowball sampling procedures. Following this, data collection and analysis methods are outlined. Finally, strategies for ensuring rigor in qualitative research and how they were used in this project are discussed.

3.2 The Qualitative Approach: What is Qualitative Research?

Qualitative research explores the feelings, understandings, and experiences of others through interviews, participant observations and interpretive texts in order to gain insight to the meaning systems and processes shaping the social world. Qualitative work is in the

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[11] I conceptualize everyday geographies as the society-space and people-place relationships that comprise individual and collective social worlds.

'reality reconstruction business': it aims to reconstruct the meanings and actions that add to the experiences of social life (Schwartz & Jacobs, 1979; Baxter & Eyles, 1997). Three features distinguish qualitative work from other approaches in the social sciences (Bryman, 2001). First, qualitative work is often characterized by an inductive link between theory and research in which context-dependent concepts and categories are induced from empirical data to generate theory and understanding. Second, qualitative work endeavours to understand and describe the world of lived experience from the point of view of those that live it. Finally, qualitative work approaches the world of lived experience as an assemblage of competing social constructions, representations and performances.

3.2.1 History and Research Traditions

Qualitative methodologies have become increasingly important to the practice of geographical research (Cloke et al., 1991; Crang, 2002). The impetus for the incorporation of qualitative methods, such as interviewing and participant observation in geographic research, was the emergence of humanistic geography and its concerted critique of spatial science (Dwyer & Limb, 2001; Cloke et al., 1991). As geographers strove to bring human subjectivity to the centre, qualitative methods were increasingly employed to elucidate the everyday geographies of social life (Hay, 2000). Over the last twenty years, burgeoning feminist, post-modern and poststructuralist perspectives have further legitimated the use of qualitative methods within the discipline. Broadly speaking, geographers have used qualitative methods to explore everyday geographies by (1) examining the representations and interpretations people use to make sense of their social and material worlds, and (2) examining what people do (their presentations and performances) (Smith, 2001). Through such geographical research, two avenues have been explored (Winchester, 2000). The first is concerned with the context of social life as expressed in the form of social, political and economic structures such as race, gender, and class. This geographical research addresses the shape of these societal structures and the processes by which they are constructed, maintained, legitimated and resisted. The second avenue of geographical research employing qualitative methods has been concerned with human agency and the systems of meaning that constitute everyday life.

Using these as touchstones, this study seeks to understand resistance to sour gas development by examining the experiences of members from two citizen groups that mobilized to stop the drilling of a sour gas well in close proximity to their homes.

3.2.2 The Ethics and Politics of Research

Qualitative work is a mode of interference in the day-to-day lives of others and any understanding of this type of research would be incomplete without due consideration of the power relationships that traverse the research process (Smith, 2001; Ley & Mountz, 2001). Power relations are unescapable and in some cases can be detrimental to the research subject (Dowling, 2000). Two issues concern the potential risks that research and researchers pose to subjects. The first issue is the 'politics of representation' (Nast, 1994; Wilton, 1999). This describes the power researchers have when representing others and the potential to misrepresent given the fact that any understanding is always partial: a researcher can never actually 'walk in their shoes.' The second issue is the 'politics of fieldwork' (Katz, 1994; Hyndman, 2001; Kobayashi, 1994). This describes the level of personal involvement in the lives of others throughout the research process. Qualitative work often involves the development of close personal relationships with study participants as the interpretation and understanding of experience is sought. Ideally, researchers strive to avoid potentially exploitive power relations in exchange for reciprocal ones that contribute to the wellbeing of both researcher and participants (Bowes, 1996; Morgan, 1996). Unfortunately, asymmetrical power relations develop and detract from the potential benefits of the research for the participants or the researcher (Dowling, 2000).

Qualitative work encompasses two strategies for dealing with ethical issues and political goals (Hay, 2000; Limb & Dwyer, 2001). First, qualitative work requires an ethical framework to guide the conduct of the research and the researcher so as to ensure that mutual benefits accrue from the research conducted and that exploitation during the process is mitigated or eliminated (Dowling, 2000). Ethical guidelines concerning privacy and confidentiality are common in qualitative research, including the use of informed consent when soliciting participation. Informed consent ensures that participants have a broad understanding of the research, the researchers expectations and how the data will be subsequently used. A second strategy, critical reflexivity, ensures the work is politically empowering and ethically sound (England, 1994; Dowling, 2000; Butler, 2001). At each stage it is vital for the researcher to critically reflect on and evaluate the power dynamics that pre-exist the research, the ethical issues that relate to the research, and the degree that perspectives and opinions have changed during the research process. Critical reflexivity is vital for negotiating the politics of representing and interfering in the day-to-day lives of others and for ensuring that the research is ethically sound.

In this project, these issues were addressed by adhering to the University of Alberta's ethical guidelines for research and by keeping a field notebook. Before the research process began, a research proposal was submitted to the Faculties of Arts, Science and Law Research Ethics Board for approval (Appendix B). This process required a thorough review of the research process. Particular attention was paid to the informed consent component to ensure individuals were agreeing to participate with full knowledge of what the research entailed. While the Ethics Board approved the proposal, they expressed concern regarding the optional use of pseudonyms and participant confidentiality. As the research progressed it was decided by the principal investigator to universally apply pseudonyms to all participants. As well, a field notebook was used to document the research experience. This was extremely useful for noting emerging issues and recording communications with participants.

3.3 Research Approach

This study employed qualitative interviews to reconstruct the personal experiences of citizen group members who opposed sour gas development near their communities. Narrative analysis was utilized to interpret the experiences of group members. Narrative analysis is one example of discourse analysis; a multidisciplinary body of work that seeks to illuminate the relationships between language and social processes. Discourse analysis has been widely applied within qualitative research and is philosophically grounded in a social constructionist[12] approach to knowledge and meaning (Guba & Lincoln, 1994; Hay, 2000).

Narrative analysis is an appropriate analytical method for this work because an understanding of the meaning and experience of spatial politics requires an understanding of the ways we make sense of changes to our environment in the context of past lives, current situations, and future prospects (Wilkinson, 2001). Narrative analysis is sensitive to the temporal sequence respondents' sense in their lives and inject into the representations of their experiences. These representations are considered as more than mere reflections of experience. They are analyzed as 'cultural documents' that embody dominant moral orders and beliefs and are actively involved in their ongoing reproduction (Becker, 1997). The following section begins by summarizing the ontological, epistemological and methodological foundations of the social constructionist paradigm (Guba & Lincoln, 1994). I then introduce and review the main tenets of discourse analysis, and finish by defining and delineating the practice of narrative analysis.

3.3.1 Social Constructionism

Broadly speaking, social constructionism is a philosophical paradigm that views knowledge and meaning as socially produced rather than discovered (Guba & Lincoln, 1994). The constructionist paradigm is far from monolithic and social costructionism is but one example of a variety of constructionist approaches that have been developed across the social sciences (Schwandt, 1994). Alongside social constructionism are radical (reality is a product of the brain), cultural (reality is a product of culture) and critical (reality is a product of power relations) constructionist approaches (Schwandt, 1994).

The social constructionist paradigm entails unique ontological, epistemological and methodological assumptions for approaching the material and social world (Guba & Lincoln, 1994). Ontologically, the social constructionist paradigm accepts that there is no objective, real social world. The social world is conceptualized as a collection of subjective constructions that are continually being drawn and redrawn through the social interaction of actors at particular points in history and in particular contexts (Guba & Lincoln, 1994; Schwandt, 1994; Potter, 1996). This study adopts a 'trialectic' ontology in which the social world is produced through processes of representing the past (history), community (sociality) and space (spatiality) (Soja, 1989, 1996). Epistemologically, knowledge and understanding generated from a social constructionist understanding is contextual. A social constructionist approach asserts that meanings and experiences cannot be understood outside of their historical, social and geographical contexts of origin: contexts infused with moral values, beliefs and power. Methodologically speaking, understandings are themselves seen as socially contingent transactions that are negotiated subjectively between individuals. In this research, the interaction between researcher and subject is one such transaction. The aim of inquiry within a social constructionist approach is the understanding and reconstruction of meaningful social action (Potter, 1996).

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[12] 'Constructionism,' is sometimes used interchangeably with the term 'constructivism.'

While some overlap exists with other constructionist approaches, the work presented here adopts a social constructionist position (Gergen, 1985), which views the social world as a collection of subjective constructions created through the act of storytelling. Storytelling is a unique type of discourse, a topic to which the next section turns.

3.3.2 Discourse and Discourse Analysis

> Discourse is language use relative to social, political and cultural formations – it is language reflecting social order but also language shaping social order, and shaping individuals' interactions within society.
>
> \- Jaworski & Coupland, 1999, p. 3

Discourse analysis is an approach to dissecting social life that seeks to understand the significance of events and places by stepping into the meaning systems that structure knowledge of the social and material world (Jaworski & Coupland, 1999; Mills, 1997). Discourse is a complex term that is used in different ways in multiple disciplines (van

Dijk, 1997; Mills, 1997). Simply put, discourse is language in use. However, as the above quotation illustrates, discourse can encompass more than speech utterances. Discourse is language use as a type of social practice (Fairclough, 1995).

In the social sciences, two understandings of discourse have been presented (Jaworski & Coupland, 1999; Longhurst, 2001). In linguistics, discourse is an example of written or spoken language that creates meaning through the interaction of a linguistic system and its social context (Jaworski & Coupland, 1999). The analysis of discourse, as a shared system of meaning, provides a way of linking the local character of communication with the broader social characteristics of a group or culture. A second way of understanding discourse takes a deeper approach to its form and role in social life. In social theory, discourse is a way of structuring knowledge and social practice. Barnes and Duncan define discourse as 'frameworks' of meaning and interpretation pertaining to a particular realm of social action (1992). Discourse, defined in this way, is primarily indebted to the work of Foucault (1970, 1979). In the context of Foucault's vast body of work, a discourse is a system of signs, arguments, narratives, ideologies and interpretations that shape social practices and, in turn, shape, legitimate and regulate reality (Hay, 2000). Discourses are identifiable, are governed by rules of construction and evaluation, and determine within some thematic area what statements are true, legitimate and genuine. (Gordon, 1994). Foucault's basic point was that discourse actively produces the objects of knowledge. Speaking about objects in the world entails the deployment of a specific type of discourse (discursive practices). Discursive practices are themselves unique to historically and geographically specific configurations of discourses (discursive formations or fields). Foucault stressed that objects are known through such practices and their truth of existence does not extend outside of the discourses that give them meaning. Given the historical and geographically contingent nature of discourse, knowledge too is relative to the context in which it emerges. Furthermore, discourse is the conduit through which power operates and fastens to the subject (Foucault, 1970, 1979).

In this tradition, discourses are heterogeneous, regulated, embedded, situated and performative (Gregory, 2001). Discourses are heterogeneous in the sense that they are multi-vocal: they have multiple authors and carry multiple meanings (Jaworski & Coupland, 1999; Bakhtin, 1986). Discourses are regulated in the sense that they are governed by internal 'regimes of truth' (Foucault, 1980) that function as criteria of acceptability to police boundaries and ensure coherence. As Barnes and Duncan note, "a discourse constitutes the limits within which ideas and practices are considered to be natural; that is, they set the bounds on what questions are considered relevant or even intelligible" (1992, p. 8). Discourses are embedded: they are rooted in social life and have material implications. They constitute the fabric of social life by providing frameworks of knowledge for understanding objects in the world (Mills, 1997). Discourses are situated, or, otherwise put, they are contextual. Their foundations are not absolute and they are situated in particular geographic and historical circumstances (Haraway, 1991). Finally, discourses are performative: the 'subject' is constituted through the repetitive enunciation of dominant or marginalized discourses (Butler, 1990; Thrift, 2001). For example, Ruth Butler has illustrated how women's identities are made and remade through discourses of sexuality and gender (Butler, 1990).

This discussion of discourse is relevant to this study because an interview is a form of discourse: it is a speech event constructed jointly by interviewers and respondents (Mishler, 1986). Through the social interaction of interviewer and respondent, meanings are socially constructed. The meanings generated in an in-depth interview are contextually grounded and any analysis and interpretation should be rooted in a theory of discourse and meaning (Mishler, 1986). As well, the research, participants and myself are shaped by different discourses circulating in culture. A recent review of qualitative approaches in geography argued that in terms of seeing people discursively constructing their worlds, seeing the field as discursively constructed and seeing both the field and the researcher as socially constructed, current work in qualitative research follows a constructionist agenda (Crang, 2003). By acknowledging the dynamic and dialogical production of meaning in social contexts, an awareness of the discursive nature of the interview process can strengthen subsequent interpretations.

3.3.2.1 Narrative Analysis

There are many different methodologies for studying discourse. The approach employed here is narrative analysis (Reissman, 1993; Coffey & Atkinson, 1996; Mishler, 1986, 1999). Narrative analysis acknowledges the discursive nature of the interview process through its close attention to the way that tellers and listeners jointly construct experiences as narratives. Narrative analysis is a multidisciplinary approach to studying discourse and has been widely applied in the social sciences to interpret multiple experiences. To name a few, narrative analysis has been used in the study of illness (Frank, 1995; Becker, 1997), identity (Nelson, 2001; Mishler, 1999), and community (Fisher, 1997; MacIntyre, 1984). In Human Geography, attention to narrative has been applied to the study of places (Tuan, 1991; Entriken, 1991) geographies of health (Kearns & Gesler, 2001) and disability (Dyck, 1995). Narrative analysis, as used in this research, takes a specific type of discourse - narratives or stories - as the central object of investigation (Reissman, 1993). A narrative or story[13] is one kind of discourse in which a teller describes events that took place in some past time world, by placing events in a sequential order with a clear beginning, middle and end, and do so to make a point, often a moral one (Finnegan, 1996; Reissman, 1993). Stories employ common conventions such as plot, characterization and point of view (Poletta, 1998). Stories are usually told around remarkable events that turn out to be special or out of the ordinary. In this sense, stories mediate between personal experience and shared social norms by articulating how to understand and react to the unusual.

Communicating the point of a story depends upon how well the teller achieves narrative 'coherence' and 'fidelity' (Fisher, 1997). A coherence view of truth differs from correspondence views in that truth is defined as what makes sense and is accepted. A story is intelligible if it conveys: (1) global coherence, or how a particular utterance is related to the teller's overall plan or goal for the conversation; (2) local coherence, which refers specifically to the relationship between one utterance and another; (3) thematic coherence, or how the story parts express the teller's 'cognitive world' (values, beliefs, ideology); (4) material coherence, which refers to how the story compares with other stories about the same topic or theme; and (5) characterological coherence, or how the characters behave in predictable ways (Mishler, 1986; Fisher, 1997). A story is believable if it can convey some sense of 'fidelity' or truth. The truthfulness or 'fidelity' of a story is measured by weighing the elements of story, or its message, alongside the values it explicitly or implicitly conveys (Fisher, 1997). These modes of intelligibility are important because they factor into our judgments about the authenticity of an account. In narrative analysis the question is not whether the account is true in the sense that it corresponds with some actual reality. What matters is that through coherence and fidelity, individuals are actively trying to articulate an authentic and believable account. These principles comprise what is called narrative rationality (Fisher, 2000).

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[13] For the purposes of this thesis, the terms personal narrative and story are used interchangeably and are understood as individual, first person accounts of experience that link past events and actions together to make a larger point.

Narrative Analytical Framework: 'Narrative as Praxis'

Individuals construct and express meaning through personal stories and these can be examined in a systematic way to generate meaningful findings (Mishler, 1986). The analytical value of narrative analysis is the access it grants to the meaning systems (in this case a narrative system) that structure the social and material world. Before stories can be collected and analyzed one needs an analytic framework that can illuminate the boundaries that define narratives, their functions and how we can understand them.

There are many different approaches to narrative analysis. This research utilizes the 'narrative as praxis' approach articulated by Mishler (1999). The 'narrative as praxis' perspective approaches personal storytelling as a social practice that constitutes the dialectical relationship between social actors and their social world. Social actors tell stories about experiences, and these stories then become the basis of the social world and subsequent experience. Focusing on the stories people tell is valuable for more than learning the 'point of the story.' Attention to personal storytelling is important because it generates insight to the life-world of the participant by showing how individuals attach meaning to events in their lives and how these meanings are influenced by the 'community stories' embedded in the places to which they belong. As was mentioned in the literature review, narrative is one of the basic mediums through which humans speak, think, and understand others and themselves (Freeman, 1997).

A narrative is more than the recital of events or a reflection of reality; it is the actual organization of experience (Reissman, 1993). Narrative is an organizing principle for individual and collective action and a critical medium through which we understand ourselves (Bruner, 1987). Expressed in another way:

> How individuals recount their histories – what they emphasize and omit, their stance as protagonists or victims, the relationship the story establishes between teller and audience – all shape what individuals can claim of their own lives (Rosenwald & Ochberg, 1992, p. 1)

The analysis of personal narratives can illuminate how individuals use language to convey meaning and experience and how that experience is concurrently structured by the stories made available by culture (Coffey & Attkinson, 1996).

This introduction to narrative analysis, in combination with the content introduced in Chapter Two, is meant to identify how personal and community narratives can be used as analytical units for investigation. This project sought to exploit the full potential of the narratives it collected by identifying how stories were structured; how they functioned as conversations, as social process, and performances; and how the stories themselves represented individual attempts to resist dominant ways of thinking. Stories have their own sense of 'poetics' (structure and form) and 'politics' (moral points and meanings). These qualities are best understood through the approach developed by Mishler (1999). The 'narrative as praxis' approach is sensitive to the structure of stories, how such structures contribute to a story's meaning, and how meaning is further bound up with the way stories function as conversations, performances, social processes and political resistance. Each of these components is summarized in the following section.

Narratives are Fusions of Form and Content

After conducting an interview and sitting down to analyze the interview transcripts the researcher is immediately confronted with a conceptual challenge: how to identify the contours (where they begin and end) of stories? The first assumption in Mishler's framework is that personal narratives employ culturally relevant narrative conventions (structural properties) that contribute to the overall narrative coherence that allows us to tell them apart. Furthermore, the structure of a story and its meaning are interdependent: each accomplishes the other. Coffey and Atkinson call this approach formal narrative analysis (1996). The foundation for this approach is largely in the work of William Labov and Joshua Walesky (Labov, 1967; Labov & Waletsky, 1972). They examined how narratives operate as a text and tried to relate the functions of personal narratives to their formal, linguistic properties (Labov, 1972; Labov & Waletsky, 1972). To identify formal properties, Labov and Waletsky approached personal narratives as texts with an internal coherence (local coherence) that could be interpreted and analyzed in isolation from the contexts in which they were spoken. The two researchers argued that aside from some differences in form and function, all personal narratives have a beginning, middle and an end and recapitulate past experience in a linear sequence by setting clauses in the temporal order in which they occurred (Labov & Waletsky, 1972). They called this form of talk 'narratives of personal experience.' Further, these texts share a common structure (see Table 3.1). This structure is comprised of some or all of the following six, basic elements: (1) an abstract that summarizes the entire story; (2) an orientation that identifies the time, place, persons, and activities; (3) complicating actions or the 'what happened' of the story; (4) an evaluation that clarifies the point of the story; (5) the result which concludes the actions; and (6) the coda which returns the perspective to the present moment (Labov 1972; Langellier, 1989; Coffey & Atkinson, 1996). Labov and Waletsky believed the primary function of personal narratives is to evaluate unusual or problematic experiences. The interdependency of structure and meaning is most clear in the evaluation stage. They argued that narratives of personal experience usually portray a protagonist struggling to restore some sort of equilibrium.

Table 3.1 Narrative Structures of Personal Experience

Structure	*Question*
Abstract	What is the story about?
Orientation	Who? What? Where? When?
Complication	Then what happened?
Evaluation	So what?
Result	What finally happened?
Coda	Finish narrative

Source: Coffey and Atkinson (1996)

Several researchers have extended the ideas of Labov and Waletsky to identify four other types of socio-linguistic 'genres', in addition to the 'narratives of personal experience' described above (Jordens et al., 2001; Martin & Plum, 1997) (See Table 3.2). These 'genres' are conceptualized as staged, goal orientated social processes, each with their own rhetorical function (Martin, 1996). Genres are staged in the sense that they usually unfold in more than one step. They are goal-orientated in the sense that their steps move towards a goal or end. They are social processes since they are negotiated interactively. The first socio-linguistic genre type is the narrative of personal experience defined by Labov and Waletsky (Labov & Waletsky, 1972; Jordens et al., 2001; Martin & Plum, 1997). The second genre type is the exemplum. The exemplum shares structural similarities with the narrative genre (Table 3.2). The rhetorical function of the exemplum is to evaluate local norms that govern a specific activity. This genre usually aims to convey some sort of moral judgment. The third genre type is the observation. The observation genre communicates a personal response to a thing or event and then evaluates the response as it affected the teller. This genre embodies 'reflexive moments' where the teller considers the event in the context of their everyday lives. The fourth genre is the anecdote, which functions to share a reaction with the audience. The anecdote is often employed to communicate embodied experiences that are difficult to verbalize but are shared by the audience. The last genre is the recount. The recount offers a straightforward record of what happened.

Table 3.2 Structural Components of Socio-linguistic Genres

Genre	*Beginning*		*Middle*	*End*		*Function*
Narrative	Abstract	Orientation	Complicating Action/Evaluation	Resolution	Coda	Evaluate unusual experience
Exemplum	Abstract	Orientation	Incident	Interpretation	Coda	Convey moral judgement
Observation	Abstract	Orientation	Event Description	Comment	Coda	Reflexive moments
Anecdote	Abstract	Orientation	Remarkable Event	Reaction	Coda	Communicate embodied experience
Recount	Abstract	Orientation	Record of Events	Reorientation	Coda	Report of what happened

Source: Jordens et al., 2001

These genres are useful because they allow the researcher to identify stories in the interview text based on elements of form and structure. Arthur Frank suggests socio-linguistic genres can serve as 'listening-devices' that aid in the interpretation of how storytellers are evaluating experiences in their lives (1995). Before analysis can begin stories have to be differentiated from other types of discourse. This requires a framework for identifying the beginning and end of stories. Most often this is intuitive as storytelling is used in everyday talk. However, social-linguistic approaches for identifying stories, such as the 'genres' summarized above, enrich the interview data by illuminating its narrative texture.

Narratives are Socially-Situated Actions

The second assumption comprising the 'narrative as praxis' approach sees personal narratives as mutually constructed, or dialogical, and recognizes the conversational qualities of stories and the work they accomplish in everyday life. (Bakhtin, 1986). Turn taking, 'sharing the floor' and interruptions figure into the ability of a conversation to construct some aspect of reality. This approach recognizes the 'work' that one has to do one when telling stories. To make a point of cultural or personal significance the storytelling must not only evaluate what happened in the past but also relate it to the present conversation. This involves the constant assessment and interpretation of others - including their beliefs, values, and experiences. This is relevant to this research as in-depth interviews often took the form of conversations. During interviews, participants employed genres that functioned to provoke a response from me. Genres such as the exemplum and the anecdote implore responses from listeners and, after hearing them, I often found myself inclined to respond.

Personal narratives also have a role as a social process. Telling stories is a social act and carries with it various functions integral to the operation of society (Maines & Bridger, 1992). Langellier states, "Telling personal narratives *does something* in the social world. Personal narratives participate in the ongoing rhythm of people's lives as a reflection of their social organization and cultural values" (emphasis in original, 1989, p. 261). This claim is relevant to this research since this study strives to understand spatial politics through the stories participants have to tell about it. However, these understandings cannot be separated from social processes such as the role interviews themselves play in society. Testimony in the court of law, sermons from the pulpit, the latest Oprah Winfrey episode or the attempt to get out of a speeding ticket all speak to the role that narratives play as social process. In this approach, personal narratives shift from a *unit* of discourse to a *type* of discourse that is used to negotiate future and past events (Langellier, 1989). This approach sensitizes this research to the social role of storytelling by raising a fundamental question: 'under what conditions do particular individuals tell particular stories to particular listeners?'

Narratives Are Political

Personal narratives are identity performances that express who we are or who we want to be (Langellier, 1989; Mishler, 1987). The performance of narratives about identity formation often function to bring attention to unequal power relations and in this sense can be considered political acts (Langellier, 1989; Rosenwald & Ochberg, 1992). Under such an examination a narrative becomes a "preformed text that is examined for its relation to the enhancement of experience and the politics of control, power and knowledge" (Langellier, 1989 p. 267). In other words, the story is always political and itself points to relations of power, knowledge, ideology, identity and resistance. Within discourse, whether it is the scientific discourses of medicine or the discourse of law, stories are told from, and serve to resist, multiple ways of seeing and relating to the world. The analysis of personal narratives as political praxis first recognizes the relationship between text and context and then goes on to the politics of the text/context relationship (Langellier, 1989). The texts considered in this type of analysis are always performed. They are analyzed for the relationships between senders and receivers and the relationship between the moral forces controlling language and the individual telling stories.

The action of telling a counter-story is an act of resistance that contests and resists oppressive master narratives or discourses (Nelson, 2001). 'Counter-stories' are stories that "resist an oppressive identity and attempts to replace it with one that commands respect" (Nelson, 2001p. 6). 'Counter-stories' first identify which parts of the master narrative misrepresent and oppress and then offer a retelling of the master narrative that highlights the details that were previously obscured and that have the power to repair identities (Nelson, 2001). This is relevant to this study's examination of spatial politics since NIMBY movements are chiefly concerned with defending changes to the built environment and, generally speaking, involve some type of collective challenge to elites, authorities or dominants ways of thinking.

In summary, this review, in combination with the content introduced in Chapter Two, has identified how personal and community narratives were used as analytical units for investigation. Specifically, this approach encompasses three main assumptions that provide the framework for the following analysis (Figure 3.1). First, narratives are structured. They are fusions of form and content. By form, I am referring to the semantic structure of personal narratives. By content, I am referring to the point of the story or its meaning. The structure and meaning of a story are interdependent. Each helps accomplish the other. Second, narratives are socially situated actions and are co-constructed between actors in specific social circumstances. Finally, narratives are always political. We express who we are through our stories – they are formative. These stories, as situated social actions, can limit or enable who we can become depending on where we are and who we are interacting with. It is within this framework that personal narratives collected through in-depth interviews were analyzed.

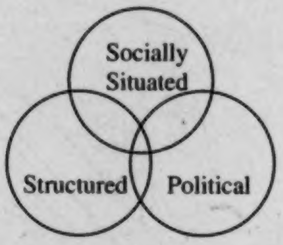

Figure 3.1 Analytical Framework

3.4 Research Design: A Collective Case Study

This study used a collective case study approach. A case study is defined by the unique and particular characteristics of an individual, group or place over a period of time (Hay, 2000; Yin, 1984; Creswell, 1994; Patton, 1990). A case is a phenomenon occurring in a bounded context and can be anything from an individual, a role, an experience, a small group, a community or a nation (Miles & Huberman, 1994; Stake, 1994). A collective case study considers two or more cases together to give the researcher a deeper understanding of processes and outcomes. In the context of this research, an understanding of individual and group civic action resisting sour gas exploration is sought. At the broadest scale, the study examined two cases of public opposition to sour gas developments; one between the Calgary North H_2S Action Committee, local landowners and Canadian 88 Energy Corporation in the Lochend area northwest of Calgary, Alberta (1999), and a second between the Clearwater Coalition, local landowners and Shell Canada Limited in the Clearwater area outside of Rocky Mountain House, Alberta (2000). These two cases of public opposition to sour gas developments were selected because they reflected public contention over oil and gas development, are good representations of collective action against environmental hazards, and represent the local expression of the larger anti-toxics movement.

A collective case study in which cases can be defined at different scales poses unique challenges for bringing together qualitative data from multiple sources. Strategies for cross-case analysis can be grouped into three broad categories: case-orientated, variable orientated, and mixed strategies (Miles & Huberman, 1994). A case-orientated strategy treats each case as a whole entity and after exhausting each case internally, turns to comparative analysis with other cases (Miles & Huberman, 1994; Ragin, 1987). A variable-orientated strategy focuses upon variables that cut across all the cases and a mixed strategy combines the two (Miles & Huberman, 1994; Ragin, 1987). This research takes a mixed approach. At the largest scale, both cases were approached as separate phenomenon. As well, common recurring stories emerged across both cases as respondents recounted their experiences (see results in Chapter Four).

3.4.1 Participants

In qualitative research, several methods exist for the selection of study participants (Patton, 1990; Bryman, 2001; Denzin & Lincoln, 1994; Hay, 2000). Two major strategies exist: random and purposive sampling (Patton, 1990; Hay, 2000). This study utilized purposive sampling techniques because the goal of the project was to understand the stories of those residents who chose to actively resist the development rather than to develop a generalizable understanding of the greater community. Purposive sampling selects participants based on specific characteristics that they possess and the light they can shed on the issue under study (Bradshaw & Stratford, 2000). In particular, participants were selected using snowball sampling techniques (Patton, 1990; Bradshaw & Stratford, 2000). Snowball-sampling techniques build a sample by capitalizing on the social relations that pre-exist the research. Given the aim of this study, a sample of activists from each case was desired. Individuals who participated in public hearings relating to each case were solicited, as their names were part of public record. From there they were asked, "Is there anyone else with your background that I should interview?" Based on their responses, other participants were identified, approached and interviewed. The advantage to using this strategy was the design of a sample that captured the activist community in each case study. The disadvantage, however, was that others with similar experiences but no connection to the people interviewed, or individuals with contrasting backgrounds and perspectives to the existing sample, may have been excluded.

3.4.2 Data Collection and Analysis: Interview Design

In-depth interviews were employed as the primary means of data collection. They were used to get participants to provide an account of their attempts to stop sour gas development and the meanings they ascribed to these experiences. The purpose of in-depth interviews is to obtain a description of the lived, everyday world from the respondents' own perspectives (Kvale, 1996). There are four reasons for choosing interview methods in general (Krueger, 1994; Minichiello et al., 1995). First, they are used to supplement the knowledge gaps that other methods cannot address, namely a sympathetic understanding of subjective experience. Second, they are used to investigate social action and motivations. Third, they are intended to collect a diversity of opinions and perspectives, or, in some cases, consensus around a particular issue. Fourth, they may be employed with the aim of contributing to goals such as empowerment and change.

There were several guidelines for conducting research interviews that directed how individual interviews were conducted (Kvale, 1996; Dunn, 2000). First, an interviewer should possess extensive knowledge of the interview theme. Familiarity with the main aspects of the issue under study aids the interviewer in deciding what topics to pursue during the interview. Secondly, the interviewer should provide some structure to the interview by discussing its purpose and signalling its end by sharing what was learned during the conversation. Third, the interviewer should use clear, concise and consistent language and avoid academic jargon. Fourth and fifth, it is important to be gentle and sensitive during an interview. This includes allowing interviewees to complete what they are saying and to tolerate pauses. Sensitivity is important as emotional stories and experiences may be conveyed. Sixth, a degree of openness is important on the part of the interviewer as new ideas and themes may arise during conversation. Often, the most important findings arise when research interviewees are able to introduce new topics for discussion. Seventh, in balance with openness and gentleness, an interviewer needs to exhibit some degree of steering. The interviewer must be willing to steer the interview back on course. Eighth, a researcher must be critical. It is important for a researcher to identify and probe themes or topics to ensure the validity of the data collected. Ninth, an interviewer should always note what has been shared so far so as to revisit previous statements or relate what was said in different parts of the interview. Finally, it is important for the interviewer to clarify shared meanings in conversation by providing an interpretation of what was said. Many of the interviews conducted for this research involved sharing painful and emotional experiences. Over the course of the research tolerating pauses and employing sensitivity was an invaluable habit that helped facilitating fruitful interviews. As well, balancing openness with control was important for managing the interview by allowing new topics to be raised while keeping the interview on track.

A significant issue in qualitative research is the selection of appropriate sites to conduct research interviews (Katz, 1994; Krueger, 1994; Yin, 1989). Often the decision is not analyzed critically when in fact where the interview takes place can have far reaching implications for what information is shared (Kondo, 1990; Berik, 1996). In this study where the interviews took place undoubtedly influenced the conversations, performances and stories that were collected. Elwood and Martin point out that the relationship of the interviewee to people, places and processes that are discussed in the interview can vary depending upon where the interview is taking place (2000). They argue that the very places geographers strive to learn more about in some cases constitute the social situations in which interviews take place. They suggest that, "the interview site itself produces 'micro-geographies' of spatial relations and meaning, where multiple scales of social relations intersect in the research interview" (Elwood & Martin, 2000 p. 649). The foremost example of this is the home as an interview site. The home is a nexus of a specific configuration of social relations. It is critical for the researcher to recognize that while interviewing in the home, the power relations characteristic of a research interview intersect with the social relations that constitute that social space. For this research, this was an important realization as several different public and private sites provided the location for research interviews (Table 3.3).

Table 3.3 Interview Sites

Interview Location	*Number of Interviews*
Home	13
Bar	1
Coffee Shop	1
Restaurant	1
Office	3
Hotel Room	1

Undoubtedly these sites figured into the nature of conversations that arose during research interviews. The interview location may have predisposed some respondents to comment on issues related to that place. In other cases, the politics of places such as the office may have deterred discussion of 'risky' topics. As well, five interviews in this study involved cohabitating couples. Interviewing couples is a unique and challenging context irrespective of location. The question of whether couples should be interviewed, together or apart is highly debated in family studies (Aitken, 2001; Handel, 1996; Hertz 1995; Valentine, 1999). Upon analysis of interview transcripts it was clear that stories told by couples were jointly constructed and embodied gender and associated power relations.

3.4.3 Interviews

This research utilized an unstructured interview design. There are several different interview designs to choose from when doing qualitative research (Yin, 1989; Patton, 1990; Denzin & Lincoln, 1994). Three types of interview designs can be differentiated in the literature: structured, semi-structured and unstructured (Dunn, 2000). Structured interviews follow a standardised list of questions that are posed to each interviewee in the same order and in the same way. In contrast, the interviewee directs unstructured interviews. Falling in between, the semi-structured interview has some of the qualities of a structured interview (list of questions) but retains the flexibility of the unstructured approach. For this research, the aim of the interviews was to elicit well-formed narratives of personal experience. Unstructured interviews are well suited to invoking personal narratives because they minimize the interference of the interviewer so as to allow the interviewee the freedom to talk uninterrupted. Some individuals, however, were unwilling to guide the interview on their own. Therefore, the interviews ranged between semi-structured and unstructured depending upon the willingness of the interviewee to "hold the floor."

For the Lochend case, nine participants in total were interviewed (Table 3.4). Of the nine participants in total, six respondents were residents who had taken direct action to oppose the proposed development. Three other individuals were interviewed to gain more understanding of the case. One respondent was an expert working for the Calgary Regional Health Authority, one respondent was employed with the Municipal District of Rocky View, and the other was an employee of the Alberta Energy and Utilities Board. For the Clearwater case, seventeen participants in total were interviewed. Of the participants interviewed, fourteen were residents who had taken direct action to oppose the proposed development. Three other individuals were interviewed to broaden the understanding of the case. One was an expert working on behalf of the David Thompson Regional Health District, another was an employee of the Alberta Energy and Utilities Board, and the other was a lawyer who represented residents at the public hearing.

Table 3.4 Number of Study Participants

Case	*Residents*	*Experts*	*AEUB*	*Municipal Government*	*Lawyer*	Total
Lochend	6	1	1	1	0	9
Clearwater	14	1	1	0	1	17
Total	20	1[14]	1[15]	1	1	24

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[14] The same expert was interviewed for both cases.

[15] The same AEUB representative was interviewed for both cases.

3.4.3.1 The interview guide

An interview guide is a list of general topics the researcher would like to cover (Dunn 2000; Kvale 1996). For this research, the interview guide utilized a number of prompts designed to elicit personal narratives (Appendix D). The interviews had two purposes. First, the aim was to acquire an understanding of individual's attachment to his/her immediate locale. The interview began by asking respondents to share a little bit about themselves. Most respondents shared a personal history leading right up to the present moment. Others were less willing to go in depth and were subsequently asked probing questions such as, "How long have you lived here?" or "what do you like most about living here?" The second aim of the interview was to elicit a description of the case under investigation, namely, civic action and sour gas development. Some respondents, understanding the purpose of the interview, and with no prompting on the part of the interviewer, linked their personal histories to the civic action under investigation. Others needed direct prompting before speaking on the matter. This prompting ranged in degree and depended on the willingness of the respondent to speak freely and without guidance. For some participants, the question, "Can you tell me what happened?" was enough to elicit a full description of events. For others, more prompting was needed.

3.4.4 Data Analysis

All interviews were tape recorded and subsequently transcribed verbatim by the prinicipal researcher (see Appendix E for transcription notation). The resultant textual data was then analysed according to a three-phase process - data reduction, data display and conclusion drawing/verification - outlined by Miles and Huberman (1994). Data reduction involves the selection of pertinent data for analysis. This occurs at two points in the research process (Miles & Huberman, 1994). First, it occurs as the researcher chooses a conceptual framework. Second, it occurs after data has been collected. The second sub-process, data display, involves the organization of data in a way that permits the researcher to draw conclusions (Huberman & Miles, 1994). Examples of data display are interview summaries, diagrams or text matrices. Finally, the conclusion drawing/verification sub-process involves the analysis and interpretation of meanings from the collected data (Huberman & Miles, 1994).

3.4.4.1 Data Reduction

For this research, data reduction occurred at two points in the research process. First, the selection of narrative analysis as a conceptual framework effectively reduced the data to be subsequently considered for analysis. This research takes the story itself as the central object of investigation. Therefore, the primary focus of the analysis was steered towards the stories shared during research interviews. The latent coding of emergent themes and the selection of stories within research texts comprised the second point of data reduction (Coffey & Atkinson, 1996). Allocating or linking portions of the interview text to meaningful themes is referred to as coding (Lofland, 1995; Hay, 2000). Implicit themes that originate from the text itself are referred to as latent codes (Lofland, 1995; Hay, 2000; Bryman, 2001). This process was accomplished using a computer assisted qualitative data analysis (CAQDA) software system called NVivo to code interview texts based on three criteria: (1) latent codes based on emergent themes, (2) coding based on the sociolinguistic properties of story genres defined earlier, and (3) coding based on the storylines of interviews.

There were four phases to the coding process. First, the interview texts were coded into discrete episodes representing how the respondents ordered what happened in the past. In total, 5 common episodes were identified and coded. These included, personal history, notification, mobilization, consultation, public hearing, and the decision. These episodes served as a meta-structure or plotline for the interview data. Second, passages were identified and coded as story genres. Stories were coded using the narrative, exemplum, observation, anecdote and recount genres presented earlier. It should be noted that some stories were coded as more than one genre and in other instances, genres overlapped in the interview text. Given that genres function as 'listening devices,' coding the interview data into genres facilitated interpretation of the data. Third, interview texts were coded for important themes and concepts as they emerged through the interpretation of each story genre (Dunn, 2000). Finally, as thematic coherence emerged around certain storylines, narrative types or 'threads' were identified.

3.4.4.2 Data Display

Data display was accomplished using the CAQDA software package to search and retrieve stories to address different analytical questions. Cross-tabulations or 'narrative matrixes' were constructed by searching for the intersection of story genres, episodes and meaningful emergent themes. For example, cross-tabulations were created to display the stories told in the notification episode across all interviews. Furthermore, these stories could be further filtered to show only those that were coded by a specific theme (for example, mistrust). This process of displaying data was useful as it allowed the search and retrieval of stories pertaining to specific episodes of the conflict or meaningful themes generated earlier.

3.4.4.3 Conclusion Drawing/Verification

Finally, the conclusion drawing and verification sub-process was accomplished through a 'narrative structuring' process (Kvale, 1996). This process was used to interpret the significance of stories shared during the research interview and to reconstruct these narratives into representative stories about each case study. During this phase, I alternated between a "narrative-finder" and a "narrative-creator" (Kvale, 1996). As a "narrative-finder" I was interpreting the narrative threads in each interview text. As a "narrative-creator" I was reassembling these into representative stories about each case. The intersection of emergent themes with narrative structures allowed the experiences of individuals to be explored and understood within the "narrative as praxis" framework (Mishler, 1999).

3.4.5 Ensuring Rigor

Rigor is a term used to describe the quality of research (Kvale, 1996; Bryman, 2001; Bailey et al., 1999). In quantitative research, rigor is the satisfaction of the conventional criteria of validity, reliability and objectivity (Baxter & Eyles, 1997). Research is deemed high quality if it can demonstrate that its measurements have a valid and reliable correspondence with the objective world. In qualitative research, however, these criteria – validity, objectivity and reliability - cannot be applied to evaluate the merits of research in the same way. In qualitative research, rigour is the degree to which the findings are believable, authentic and trustworthy (Baxter & Eyles, 1997; Bailey, 1999). As an alternative to validity and reliability, Guba and Lincoln propose two primary criteria for assessing qualitative research: trustworthiness and authenticity (1994; see also Baxter & Eyles, 1997). Critical self-reflection is another mechanism for adding to the rigor of research (Bradshaw & Stratford, 2000). Critical reflexivity is important for understanding the values, perspectives and opinions the investigator brings to the research process. It is important when writing up the research to disclose how one came to be interested in the topic, and for what purpose. As well, it is important to disclose the philosophical, theoretical and political dispositions that compose the pretext for interpretation. Such an autobiography provides context to how the data was interpreted. Field notes and journal writing are two ways a researcher may use to keep a clear record of how interpretations may have change over time.

3.4.5.1 Trustworthiness

Trustworthiness is the degree that findings are believable. Trustworthiness can be further subdivided into four evaluative criteria: credibility, transferability, dependability and confirmability (Guba & Lincoln, 1994; Baxter & Eyles, 1997; Bailey, 1999). Credibility is "the degree to which a description of human experience is such that those having the experience would recognize it immediately and those outside the experience can understand it" (Baxter & Eyles, 1997, p. 512). Credibility is premised on the assumption that multiple realities coexist (Baxter & Eyles, 1997). The plausibility of researcher interpretations can be evaluated by seeking the interviewee's commentary on the matter. Baxter and Eyles identify several strategies for satisfying the criteria of credibility (1997). These include purposeful sampling, employing a disciplined subjectivity, prolonged engagement, triangulation, negative case analysis, and member checking. In this research, credibility was ensured through purposeful sampling, triangulation, member-checking, the use of mechanically recorded data and autobiography. To ensure credibility, purposive sampling methods were used to ensure an appropriate sample of activists was constructed. The use of multiple information sources was also used to confirm or corroborate results. Government representatives and a risk assessment expert were interviewed to provide divergent descriptions of each case. The use of other data sources such as public documents and media sources were also utilized as means of triangulation. Triangulation stands for the use of multiple methods or information sources to confirm or corroborate results (Hay, 2000). Triangulating between interview transcripts, media accounts and public hearing transcripts strengthened the reconstruction of each case. Finally, credibility was ensured through member-checking of results. After the preliminary analysis of data, study participants were sent one copy of their interview transcript along with a summary of preliminary findings. Participants were asked to first read through the transcript and review the conversation that took place. They were given the freedom to select any passages for comment or to designate them as off limits for any quotations in future publications. Participants were also given a sheet of preliminary findings and asked to comment on how close they represented the opinion and perspectives shared during the interview. Preliminary findings included a list of emergent themes that were used to talk about place identity, social identity, concerns and experiences. Themes were given a 1-2 sentence description. Participants were asked to browse through the list of themes and elaborate on the ones that they most identified with and identify the ones they saw as out of place by writing in responses and mailing back the feedback form. In total seven participants responded and provided feedback on preliminary results. The quality of the feedback forms received, however, were excellent. By granting participants the opportunity to reflect on preliminary findings the subsequent analysis was brought into a sharper focus with the effect of strengthening the believability of study findings.

The second way to evaluate whether research findings are trustworthy is through the criterion of transferability (Baxter & Eyles, 1997). Baxter and Eyles define transferability as "the degree to which findings fit in contexts outside the study" (1997, p. 515). The primary assumption when assessing transferability is the recognition that findings are time and context bound. The opinions and perspectives of participants are context-specific and bound to the setting of the study. Often, in case study approaches, the researcher does not attempt to apply the context dependent concepts outside of the case examined. However, qualitative work can be transferred to other contexts given the inter-subjectivity comprising social life. Baxter and Eyles suggest purposeful sampling and thick description as two strategies for ensuring that transferability is possible (1997). In this research transferability was ensured through purposive sampling strategies such as snowball sampling.

The third criterion for evaluating trustworthiness in qualitative work is dependability. Dependability is the degree to which constructs remain consistent over time and space (Baxter & Eyles, 1997). Guba and Lincoln suggest that researchers adopt an "auditing" approach so as to allow the explication of procedures (1994). This includes keeping accessible records of each phase of the research process. This research ensured dependability through use of mechanically recorded data. All interviews were tape recorded and transcribed verbatim. However, in some cases, it was beneficial to return to the original recording to revisit the original context in which experiences were shared.

The final criterion for assessing trustworthiness is confirmability. Baxter and Eyles define confirmability as "the extent to which biases, motivations, interests or perspectives of the inquirer influence interpretations" (1997, p. 512). This criterion does not advocate absolute objectivity, but instead serves to show that the researcher did not overtly allow personal values to direct the conduct of the research. In this research confirmability was ensured through autobiography and critical reflexivity. Autobiography was used to provide context to the interpretations presented in this research. This thesis is concluded with a section entitled, "relocating myself." It serves to situate myself as the primary investigator and trace how my subjectivity influenced the research process.

Upon reflecting on the trustworthiness of this research several issues stand out. In regards to methodology, limitations hampered this research. First, the research was conducted two years after the conflicts took place. A major analytical assumption is made concerning discourse and its role in collective action. It is assumed that the stories told to me were characteristic of the stories told during the micro-mobilization processes that led to the formation of both groups. It must be pointed out that I was not there to confirm or disconfirm this. However, documents originating from public hearings do confirm that some consistency has been maintained between the time of the conflicts and the time of this research. As well, issues exist around the member-checking process. Member-checking was utilized to assess the credibility of preliminary results but was not applied to final results. Therefore how believable the respondents may have found the narrative types presented in this thesis is unknown. Finally, due to time and resource constraints no inter-coder reliability was attempted. Therefore all interpretations are mine.

In regards to the theoretical stance of this research, several issues exist. First, there are several epistemological and ontological critiques of social constructionism that are relevant to this study. Ontological and epistemological issues are important because they may limit or permit certain types of knowledge. For example, critics claim that the elevated status given to concepts such as 'context,' 'situatedness' and 'positionality' by constructionist approaches has debased the universal claims of science and in the process trivialized knowledge claims (Harvey, 1996; Bassett, 1999; Dunlap & Catton, 1994). Ontologically, critics of social constructionism have argued that it is morally wrong because it denies that there are features of the world that are independent of the social and cultural (Bickerstaff & Walker, 2003; Demeritt, 1996; Dunlap & Catton, 1994; Benton, 1994). Critics further argue that the relativism indicative of social constructionist approaches effectively depoliticizes the existence of external dangers (Demeritt, 1996; Dunlap & Catton, 1994; Benton, 1994; Dickens, 1996).

Second, this project is guilty of an overly emphatic fixation on narrative discourse to the exclusion of other types of representation. A focus on narrative discourse is justified because it is one important form of discursive representation by which the world is socially constructed. In addition, a focus on narrative discourse is functional because it reduces the potential data to be considered for analysis. However, other types of social discourse could be used to represent the world around us. By not accounting for alternative types of discourse this project may have glossed over alternative meanings tied to the phenomena under study.

Finally, it is vital to recognize that I was an outsider to both communities. As part of the 'academy,' in my case the University of Alberta, we must accept that we cannot fully walk in the shoes of our respondents. As researchers we occupy a middle ground between an empathetic understanding of experience and merely attending to the experiences of others by listening to their stories. As Katz explains, we occupy a 'space of betweeness' that can be empowering, frustrating, but always political (Katz, 1994). In this space, all understandings and interpretations are partial: they are partial understandings of the experiences of others and are partially a product of the subjectivity of myself the researcher.

3.4.5.2 Authenticity

In conjunction with trustworthiness, the second criterion for assessing qualitative work is authenticity (Guba & Lincoln, 1994). Considering authenticity raises wider issues concerning the impact of the research on those involved. Authenticity can be subdivided into 5 criterion: fairness, ontological authenticity, educative authenticity, catalytic authenticity and tactical authenticity. Byron explains each by posing the following questions (2001). In the case of fairness, does this work fairly represent divergent viewpoints? In the case of ontological authenticity, does this work help individuals arrive at a clearer understanding of their social setting? In regards to educative authenticity, does this work help individuals understand and appreciate the divergent views of others in their social setting. In terms of catalytic authenticity, does this work empower people to change? And finally, in regards to tactical authenticity, does this work build the capacity of individuals to make changes?

In reflecting on the authenticity of this research several issues stand out. For example, in several sections of this thesis, participants are referred to as 'activists,' however, at no point were respondents explicitly asked if they saw themselves in this way. In fact, I suspect that some respondents may disagree with being painted with the activist brush. This uncertainty detracts from the authenticity of how respondents are represented in the research. As well, the degree to which this research can be categorized as empowering is uncertain. The research design did not include a follow-up component for assessing the effects of the research process on how participants understood their current social setting. However, during the interview process it seemed that some respondents arrived at new and significant realizations while relaying memories of past experiences.

3.5 Chapter Summary

In summary, this chapter has presented an overview of the methodological approach used to analyze risk politics around sour gas development in two Alberta communities. This study employed qualitative interviews to reconstruct the personal experiences of citizen group members. Narrative analysis was utilized as a 'reality reconstruction tool' because it grants access to the meaning systems through which participants structured the experience of the social and material world. It has been emphasized that in narrative analysis the story is both the object and the method of analysis, and as such, the theoretical foundations of narrative as a phenomenon and the methodological issues of how to locate them were interrogated. In Chapter Four, I present the study's primary findings: (1) two composite sketches about each case assembled from interview data, (2) patterns of emergent themes, and (3) four story types that emerged across both cases that I call 'narrative threads'.

4 RESULTS

4.1 Introduction

The purpose of this research was to disentangle layers of narrative to make sense of siting conflicts over sour gas development. This study examined interviews with participants belonging to two grass-roots initiatives that mobilized to stop the drilling of a sour gas well in close proximity to their homes. The results are divided into three parts: (a) two community stories that describe the cases under study, (b) a collection of themes emerging from an analysis of individual stories, and (c) four story types that respondents used to represent their experiences. All three sets of findings illuminate the two conflicts in complimentary ways. The 'community stories,' tell what happened in each case, while emergent themes allow an understanding of common experiences that were shared by participants. Story types grant insight to role that specific stories played in how participants saw their community.

A critical component of qualitative research is adhering to ethical guidelines. For this research, informed consent, anonymity and participant feedback were important components for ensuring the research was completed in an ethical manner. In the following presentation of results, the identities of respondents and characters described in stories have been replaced with pseudonyms. Although some respondents did not request the use of a pseudonym, it was decided that to protect those that participated on the conditions of anonymity the use of pseudonyms should be applied universally.

4.2 Findings Set A: Community Stories

The purpose of this section is to present findings that emerged from the 'narrative structuring' process (Kvale, 1996). 'Narrative structuring' involves the reconstruction of participant's stories into 'composite sketches' about each case. The stories presented here are composite sketches describing what happened in each case from the point of view of participants that were interviewed, newspaper articles and regulatory documents in the public domain. As a result these composite sketches are partial and represent only one-side of a multisided story. Furthermore, these composite sketches are not 'representative' in a statistical sense, but instead portray what study participants and public documents stated. The sketches are the product of interpretation and should read as a re-

representation, filtered through my own subjectivity, of typical experiences shared by participants and events that defined each case. The section headings in each story represent the common events, or 'episodes,' gleaned from the interview data. These episodes serve as benchmarks to measure the similarity and dissimilarity between cases.

4.2.1 Case Study 1: The Lochend Story

The Lochend area comprises the rural-urban interface on the northwest edge of Calgary, AB (See Figure 1.2, pg. 12). The area itself has no formal boundaries but is situated in the south east corner of the municipal district of Rocky View No. 44. It is typical of contemporary rural-urban interfaces: a growing mix of agricultural land and detached country-residential dwellings, all within a short distance of the city limits. The area is highly prized for its aesthetics and relative proximity to the city of Calgary. Much of the landscape is rolling hills, barns and grazing cattle. Residents not employed in the agricultural sector are generally retired or commute daily to the city of Calgary. The area is well known for its exclusive upper-income suburbs or 'gated' communities, many of which are home to corporate professionals working in the oil and gas industry. The Lochend area population base has soared as more and more city-dwellers have retreated to the area in search of the country lifestyle. Between 1996 and 2001 population in the municipal district saw a 31 percent increase (Census Canada, 2001).

Notification

In late summer of 1997, a handful of residents living in the Lochend area received an information package from Canadian 88 Energy Corporation. The package documented the plan to drill a gas well. Concern was far from immediate as most hardly gave the package a second look:

> We came home one day, we were away, and there was a package on our step. And it had a book in it from Canadian 88 that said they were going to drill a well. And we assumed that it was an oil well because there are small oil wells around here and we didn't really pay much attention. We thought, "Oh well, another one you know." – Nancy, Farmer

Similarly, others were unconcerned after being notified:

> A guy came to my door and said, "you know we're going to be drilling this well"…I just said, "ya ya big deal that's nice goodbye [laughs]"… I said, "I presume this wouldn't be particularly different from the wells you passed by on the road?" He said, "yes." He carefully did not say sour gas or anything… it was pretty misleading. – Mary, Acreage Dweller

As people began to talk and discuss the news with neighbours, concern began to grow:

> So my daughter phoned and she just lives three miles away and she said she was quite upset... she had lived for a number of years, her and her husband and family, just downwind from a plant, a sour gas plant, near Carstairs. And they had all sorts of problems with it. Their barbed wire was all rusted out and when it rained there was yellow sulfur on top of the puddles in front of their house and the kids were sick and it was just bad news all the way around so she was very concerned cause she said, "I'm worried there's sour gas in this." – Nancy, Farmer

Many residents were alarmed by the information they had received or the fact that they received no notification at all.

> I first heard about it from [someone] here. She said, "oh by the way, do you know that Canadian 88 is going to drill a well?" And so I said, "no I haven't heard anything about it." And then I tried to contact them and I couldn't find anybody who would tell me anything… Canadian 88 just simply told me I was outside the emergency planning zone. – Fred, Acreage Dweller

A small group found the information, or lack of, concerning and felt something should be done to find out more.

Mobilization

Soon after being notified and after talking with friends and neighbours, a meeting was organized at Nancy's farmhouse. The plan was to meet and find out what was really going on:

> So I phoned a couple of neighbours and asked them what they knew about it and they didn't know anything about it either and so I said, "well lets have a little meeting and see if we can find out what's going on here." So I phoned a half a dozen people and it turned out that there were 29 of them that came to my house a few nights later that were all curious and wondering what was going on. So then we started getting into it a little more and a we got hold of Canadian 88 and one thing led to another and then we found out, yes it was a Level IV sour gas well they were going after. – Nancy, Farmer

After learning about the sour nature of the well many residents, including Nancy, were alarmed. After the first meeting, Nancy subsequently went to visit another neighbour.

> I went and talked to him about it and *he was really* [raised pitch] alarmed. *And he* [raised pitch] was the one that really got the ball going as far as the technical end of it because we didn't know anything. We didn't know anything about gas or oil or even wanted to know [laughs]… but he started digging and got a lot of information that we couldn't have got otherwise and then he involved Jim Mitchell who became the chairman and he was also very familiar with the board and the EUB. He sort of engineered that part of it. – Nancy, Farmer

The neighbour's skills later proved valuable to what would become the Calgary North H_2S Action Committee – an alliance of farmers and acreage dwellers living in close vicinity to the proposed exploratory well. After learning that the well was a Level IV sour gas well, the largest and most dangerous of its type, many residents were shocked, worried and angry:

> We were scared. We were really frightened. We just didn't know where to go and it seemed like whatever we said and did we met with a blank wall. We didn't get any satisfactory answers. – Nancy, Farmer

In the months that followed, the committee embarked upon a consciousness-raising campaign in an attempt to build opposition to the proposal. This included activities such as door-to-door visits, surveys, phone calls, petitions and public meetings:

> Well, there was a group formed in this area to object to the well and oppose it and I went to the meetings and donated money because they [Canadian 88] were being so obtuse about what exactly was going to go on. – Tammy, Farmer

At one such meeting at the local Lions Club Hall, in late November of 1997, Canadian 88 sent representatives to address the growing uneasiness in the community. Many residents with concerns came to find out more about Canadian 88's proposal. Once at the meeting, many perceived the company as condescending and felt residents were treated with disrespect:

> I was concerned that this was going to be a sour gas well (…) so I went to the open house… well I dragged my husband too [laughing]. He's not keen on going to these things. But my concern was that it was Level IV sour gas. So I went to this open house thing, looked at their brochures and I had questions and they were so condescending *it was unbelievable* [emphasized and drawn out]. It was sort of, "there, there dear don't bother your pretty little head," which irritates the hell out of everybody of course and I said to them, "I won't object to this well if you will promise that *its just a well* [raised pitch] just a well…and there will be no more. There won't be a plant started or anything like that." Well they just laughed and said, "don't worry we're probably not going to hit anything anyway." Well what a stupid answer, like really? – Tammy, Farmer

Others felt they were deliberately being misled. Another resident described his encounter with a company representative:

> Well I had been in the oil patch then for over 40 years and I knew terminology and I knew a bit of geology. So I went to the open house and I looked at their mapping and so forth and I went to one of the tables and I said, "Can you show me where the anomaly is?" An anomaly is a built up, if you can imagine, hill underground. Out in this area they run northwest southeast. It's a known geologic trend. So I went up to one of the tables and I said, "Can I get a picture of your geology here I want to see where the anomaly runs?" "Oh no we don't have anything like that." I said, "Who are you kidding. I'm in the patch, you don't go drilling a million dollar well on nothing. I mean you got to have some reason for doing that." And I imagine they wouldn't show it to me of course. – Gerald, Acreage Resident

As the weeks passed, a disjoint between the residents opposed to the well and the company seemed to grow and the parties were quickly polarized. Soon after, the Calgary North H_2S Action Committee held a meeting at the local community centre with over two hundred people in attendance. Members of the group were adamantly opposed to the drilling of the well. Many were keenly aware of the profit potential of the well for Canadian 88 and the landowner.

> If you're taking 18% overriding royalty as a farmer on a 10 million per day gas well…you don't farm no more. – Gerald, Acreage Dweller

Others were aware of the impact such a development would have on their rights as landowners to subdivide their land in the future.

> Down the road if we ever wanted to subdivide it would certainly impact us. And you know I think a lot of people had those feelings. But subdividing is not your

> God given right either in the same way that the landowners mineral rights aren't a God given right if they impinge on others. – Mary, Acreage Dweller

Around the same time another interest group called the Lochend Sour Gas Coalition formed to oppose the drilling of the well. The Lochend Sour Gas Coalition was a smaller group whose concerns focused solely on how the property values of acreage homes in the immediate vicinity of the well would be affected. Meanwhile Canadian 88 believed it had the legal right to drill and was intent on doing so. All the company needed was the well license.

The Public Hearing

On May 4, 1998, the Alberta Energy and Utilities Board (AEUB) convened in downtown Calgary to decide whether the well proposal was safe and in the public interest. A decision board consisting of engineers and petroleum professionals was assembled to hear arguments in favour of and against Canadian 88's plan. The AEUB stressed that they would only consider technical evidence pertaining to the individual and societal risks associated with the drilling and operation phases of the controversial well. Intervening against the well was the Calgary North H_2S Action Committee (CNHAC), the Lochend Sour Gas Coalition, the Municipal District of Rocky View, and the Calgary Regional Health Authority. Intervening in favour of the well was Canadian 88 and the landowner upon whose land the well was sited and who stood to benefit financially from the development. As well, a group of families also holding mineral rights intervened out of concern that a denial would render their mineral titles meaningless.

The hearing lasted several days and consisted of testimony by experts representing both sides (AEUB 1999). For many residents, it was their first experience in such a setting. Many found it intimidating and emotionally taxing. Some struggled to balance their responsibilities on the farm or at work with the demands of attending the hearing:

> Nancy: It was quite an experience for people like us who never had anything to do with any of this. First of all I had the preliminary hearing in January and that was only one day and I had never been down there [AEUB offices in downtown Calgary] before in my whole life but anyway we got educated to that. And then they called the hearing which was eight days long and we were there every minute of it. Well, we couldn't go every day because we were involved in the farming business, calving and everything else at that time.
> Tom: They think they're God sitting up front there, you got address them as sir and yes sir.
> Nancy: It was a little different than anything we'd encountered.
>
> – Nancy and Tom, Farmers

The financial burden was also a strain as the CNHAC had to hire legal representation and counter-experts who could testify at the hearing:

> We had a good lawyer, we had a good lawyer and you know, [laughs] we never have finished paying that lawyer bill off. We went around and collected, I don't know how many trips I made putting mail in mail boxes and things like that and then we went door to door, several of us, collecting money from people just trying to get some money to pay this off and we never did pay all of it off.
>
> – Nancy, Farmer

The hearing pitted proponents and opponents - neighbours and friends - against each other. Members of the committee struggled to deal with the damage this did to personal relationships, some of which had spanned entire lifetimes:

> Oh there was conflict, my husband wouldn't have anything to do with it (…) he had lived here for, oh since the early fifties. He was born east of Airdrie and had lived in this area since the early fifties, a lot longer than I had. He has a lot of good friends in this area and the people who were going to really benefit financially are old friends of his and it made it extremely difficult. It was an

> extremely difficult thing. Especially when we were at the board hearing and they're sitting on one side of the room and you're sitting on the other and they're all your neighbours, you know. – Tammy, Farmer

As the public hearing unfolded, each side began to plead their case before the board. Interveners opposed to the well launched a detailed critique of Canadian 88's application. The critique centred upon three major concerns: (1) the proposed location of the well, (2) the manner in which Canadian 88 had calculated the potential risks, and (3) the emergency response plan the company had devised to ensure public safety in the event of an accident (AEUB, 1999). First, the CNHAC and the Lochend Coalition opposed the proposed location of the well though for slightly different reasons (AEUB 1999). The CNHAC argued that the location of the well was inappropriate because of its proximity to surrounding residents living in creek valleys and the large population living down slope in north-western Calgary:

> The location to start with (…) its right down a draw, right into the city of Calgary and downwind and it just seemed to be totally unreasonable. – Nancy, Farmer

The Lochend Coalition believed the development would adversely affect the market values of acreage properties (AEUB 1999). They contended the values of these properties were largely based on aesthetic considerations, solitude and relative remoteness from industrial operations and that a well would irreparably damage these qualities.

The second critique was made by the CNHAC and the Calgary Regional Health Authority who opposed the development because they believed the manner in which the public safety risk assessment was completed was inadequate. The Calgary Regional Health Authority objected to Canadian 88's claim that the assessment was a screening level assessment based on the fact that it did not measure a 'worst-case scenario.' Both the CNHAC and the Lochend Coalition felt the company had chosen particular models and parameters that understated the risks involved with drilling and operating the development (AEUB 1999). Both the CNHAC and the Calgary Regional Health

Authority identified the sensitivity of the risk analysis to variables such as the hypothetical source conditions in a 'blowout' situation, the number of past sour gas releases, and the modeling of lethality after human exposure (AEUB 1999). The CNHAC, Calgary Regional Health Authority and the Lochend Coalition argued that Canadian 88 had underestimated the risks associated with the drilling, production, and servicing of such a development (AEUB 1999).

Finally, interveners, including the CNHAC, Calgary Regional Health Authority, Lochend Coalition and the Municipal District of Rocky View, opposed the emergency response plans presented by Canadian 88. At issue was Canadian 88's request to reduce the emergency response zone from the radius calculated using AEUB guidelines to a smaller radius. According to AEUB policy, a well of that size demanded an emergency response zone with a radius of eighteen kilometres (AEUB, 1998). However, to make the plan more manageable, Canadian 88 was asking for permission to reduce the radius to four kilometres. Both the CNHAC and the Calgary Regional Health Authority contended that this reduction excluded residents who were at risk. Further, the Municipal District of Rocky View, the government entity responsible for responding to an emergency, argued that they themselves lacked the resources to respond to victims in the event of a leak or all out blowout. After hearing the company and the interveners' technical arguments, as well as testimony from landowners living in the area, the AEUB called the hearing to an end and contemplated a decision.

The Decision

On July 19, 1999, more than a full year after the hearing, the AEUB finally released its decision. In the report the board stated, "The board believes that the public safety risks associated with the proposed well are representative of normal industrial risks accepted by society and that the well can be drilled safely" (AEUB, 1999 p. 45). The board emphasized that the risks were similar to ones already existing and accepted by society. Despite being concerned with the "state of readiness" of Canadian 88 in regards to implementation of its emergency response plan, the AEUB stated it would issue a conditional well license once Canadian 88 fulfilled 18 conditions. Members of the Calgary North H_2S Action Committee were shocked:

> I was mortified. And in fact, when I had first heard about it I was coming home from Calgary and Jim Mitchell, the fellow that started the committee, he stopped me just on the road down here and he was on the side of the road talking to, I've forgotten which station, some T.V. station and I said, "what's going on?" And he said, "do you know the board gave a decision today?" I said, "no I've been away," And I said, "what did they do?" And he said, "well they've put 18 conditions on it but if they fill the 18 conditions they can go ahead with the well." I couldn't say anything. I was mortified I couldn't believe they would let that go ahead with the information that we had heard. But, that's the way it was. – Nancy, Farmer

The Lochend Review Group

Following the decision a multi-stakeholder group consisting of representatives from the CNHAC, the Calgary Regional Health Authority, the Municipal District of Rocky View, Canadian 88, and local residents living in the Lochend area was formed to work towards fulfilling the conditions laid out by the AEUB. Many residents participating in the process felt it was one-sided and as a result most of the issues were never resolved.

> And then we had a whole series of Lochend review meetings and they were supposed to have got all these matters cleared up and all done properly. They never filled one of those conditions in all those meetings we had. – Tom, Farmer

Court Action

At the same time as the Lochend Review Group was forming, interveners sought recourse in the provincial judicial system. As a last attempt to stop the development, they took their case to an Alberta judge and tried to override the AEUB's decision. The Alberta judge refused to strike down the AEUB's approval. Despite apparently losing the battle, the citizen groups achieved some success. To this date, the well has yet to be drilled as Canadian 88 has failed to fully meet all 18 conditions set out by the AEUB. One farm resident explained:

> They didn't drill the well or they haven't yet [laughing]. There were so many conditions (...) I don't think they could possibly comply with them (...) but I think the board was afraid not to give permission for it. I really do. I was shocked that they gave permission after listening to the one day of hearings and looking over the data that came out of the hearings. And then I read the conditions and I just thought, "Well, I don't think they'll ever drill it!" – Tammy, Farmer

For others, uncertainty still exists around the fate of the development. The threat still remains since Canadian 88 or any other energy company can still pursue the well license in the future:

> And that's a threat, because they partially filled a lot of those conditions now if they took up on that and continued it's still on the books at the board, so its still, like you say lingering. It's not dead. – Nancy, Farmer

To this day the conditions needed to obtain the well license have yet to be fulfilled. In the time since the decision, the area has seen more acreage residents arrive as farmers continue to subdivide their land for country residential use. The increased settlement of the area has made the existing emergency response plan redundant and as outstanding conditions of the well license remain unfulfilled, future drilling remains doubtful.

4.2.2 Case Study 2: The Clearwater Story

Approximately 10 km south of the town of Rocky Mountain House is a small collection of acreage homes lining both sides of the Clearwater River (See Figure 1.3). Buffering the acreage neighbourhood is a mix of wilderness and farmland. Living in the area are teachers, social workers, oil workers and others who commute daily to surrounding urban centres such as Rocky Mountain House and Cochrane. Farmers and ranchers work adjacent farms scattered throughout the area.

Notification

In late November of 1999, Shell Canada notified the community of its plans to drill a well. Residents were left with what later was sarcastically referred to as their "Christmas present." A red booklet was placed in mailboxes or on doorsteps and inside was a plan to drill a sour gas well on a farm just north of the Clearwater River.

> Stuart: We got a notice in the mail.
>
> Ann: A flame red pamphlet.
>
> Stuart: A package of information on sour gas, a cover letter saying they were planning to drill two months from the time we got the letter, and they were going to spud the well right over here. We got this in late November, early December and they were going to start drilling in January. Very short notice. Conveniently around Christmas time, people are busy doing other things and maybe just glanced at it and put it to the side. – Stuart and Ann, Acreage Resident

Others heard through word of mouth:

> Well actually I was the first person to hear about it and I'll give you the exact dates, because you'll be able to hear when the story unfolds. I had been at an electricity board meeting on November the 17th, and we were having a coffee break and the fellow who lives over by the Dover Court Hill said, "Why aren't you objecting to this sour gas well Rhelda?" And I said, "What are you talking about?" "A sour gas well is going in on Rick's place." And I said, "Where?" And he said, "Well by Rick's old log house." And I said, "Come off it!" "Oh ya," he said, "Rick's known about it since July." So I drove home that way that night and shone my headlights and sure enough, there are the flags in the field. – Rhelda, Farmer

Most residents reporting feeling shock, anger and fear:

> We were angry. Angry that they could just say, we're just letting you know, even though you live here, we're letting you know that we're going ahead and drilling a sour gas well. So I mean I was angry. Cory [husband] knew about sour gas more than I did but I was frightened. I didn't want it to be that close to where we were living. – Janice, Acreage Resident

Most perceived the company as only interested in monetary gains and not in the welfare of the community.

> Like they just want to drill and make their money and we're looking at it from health and the smell and all the other things that fit in the community, like it's a completely different outlook. – Jack, Farmer

Mobilization

Immediately, neighbours were on the phone and organizing a public meeting:

> So the phone calls started, bzz bzz bzz, and within, I stand to be corrected on this, but its pretty close, within 72 hours there was a community meeting at the Arbutus Hall, at which time there was (…) around 75 people. And it was a blizzard, it was horrible, and it was quite phenomenal that all these people showed up and they were all pissed off right to here. What made them really angry was that there had been no prior notification. All of sudden this thing comes and it looks like they're just taking over the world and *coming to bust up your world* [raised pitch], and interfere with your life without any consultation at all. – Frank, Acreage Resident

Subsequent to this initial meeting, a group of residents met to strategize how they would stop the development. The same resident described it as follows:

> It caused us in very short order, to organize ourselves to have our own meetings on what was going on and to try and determine what structure we should take on,

> what we should look like if we were to oppose this because the consensus was that all of the neighbourhood or 99% of the neighbourhood was against this, so how could we organize correctly. So we formed the Clearwater coalition at that point and had a spokesman who through his own involvement was a natural leader and was never appointed, he just assumed the role along with all of the other people who had their expertise to offer and their strengths to push ahead with our coalition, as loose as it was. And as we went down the road we became tighter and we really started to develop a sound strategy for approaching the issue. And it was an issue at that point because we had gotten too many people involved to have it just swept under the carpet. It was picking up momentum.
>
> – Frank, Acreage Resident

A critical moment in the formation of the group came when a farmer from a nearby town stood and spoke at one of the early meetings:

> One of the things that certainly for me, as a livestock producer, really tipped the scale was when we got Tammy and Bill O'Neil up to talk to the meeting. Here's this hard bitten, grizzled farmer explaining what happened in that Caroline gas leak and he broke down in the meeting and I tell you, you could have heard a pin drop and we realized then that this stuff is very, very dangerous. – Steve, Farmer

Another resident related the same story:

> There was at least one farmer who was called in who had experienced it and had problems with his water well and he was a very angry farmer. So he was quite happy to let everybody know what happened to his place and that made everybody stop and think, okay, we should form a committee and find out more about it. And that was basically what the plan was, to form a committee, just to find out about it. – Janice, Acreage Resident

Consensus was not unanimous, as tension existed within the community, especially between the landowner who agreed to the development and his surrounding neighbours:

> It was extreme hurt [sic] that somebody that I thought was such a wonderful neighbour, and that damage has never been repaired. Before you used to see people dropping in all the time, you don't see that anymore. Nobody goes there anymore. He doesn't get invited to any of our local parties, you know. – Rhelda, Farmer

Protest

As time passed Shell got wind of the growing distrust and opposition to their plan. In late January 2000, an open house was organized by Shell and held at the local community hall. The Clearwater Coalition members arrived but refused to enter. They stood outside, farmers, acreage dwellers, kids and adults, with picket signs and protested Shell's proposal.

> At the open house we picketed. That's the first time anybody, all of these farm people had ever picketed in their lives. And they made homemade signs and the media was there. Shell knew by that point that things were getting a little bit out of hand here. – Cory, Acreage Resident

Mediation

Following the confrontation, Shell, the Clearwater Coalition and other groups entered into a mediation process in an attempt to work past differences and find some sort of common ground. Shell worked with the Coalition and other community members to alleviate the concerns in the community. This included numerous revisions of their emergency response plan. The long and arduous process lasted between May and August of 2000. Some residents, however, refused to participate altogether.

> I went to the first meeting, mediation meeting, and I bowed out and Shell was not too happy that I did that because they thought I should have been there. I didn't think I had any compromise available. There's nothing I wanted to talk about that

> would make me change my mind and say that its okay for you to drill that well. There just wasn't. So I didn't mediate at all. – Stuart, Acreage Resident

Others reiterated similar positions. There was nothing Shell could do to convince them the well was safe.

> I remember on a piece of paper we were supposed to put, you know write down some things that would kind of smooth things out and let's try and find a happy medium here but there was nothing that was on that paper that would make me happy other than saying, no there won't be a well. – Cory, Acreage Resident

As the process wore on many were disenchanted, saying it was "all just a smoke cloud." Most could not justify trading their health and safety for profit.

> What they ask of you is they take all the money and you take all the risk. Where's the trade-off there? I don't get it. – Paul, Acreage Resident

Eventually it was clear to the AEUB that the mediation process had failed and no comprise was available. The outcome would have to be decided at a public hearing.

Public Hearing

The public hearing began at the Dovercourt Community Hall on November 7, 2000. The primary issue was the danger to surrounding residents in the case of an accidental release of sour gas. In preparing its case the Clearwater Coalition worked with lawyers and the David Thompson Health Region to prepare a strategy. In the process some families who had unique health concerns split from the group, hired their own lawyer and orientated their case around their own needs and concerns. The hearing was also the point at which David Suzuki and his *Nature of Things* crew began filming for their documentary entitled, "Worst Case Scenario." Cameras were present at the community hall and interviews with residents took place throughout the duration of the hearing. The hearing went on for days and residents described it as incredibly stressful because the entire process was scary and intimidating:

> But the hearing, we walked in, and they had, I bet they had about six tables set up or eight tables and they had their law department, they had their experts, [laughs] it was frightening. It was frightening to walk in like that. You were really intimidated. Here we were a few rows of just ordinary common people and you look over and, oh my god, there were all these boxes and boxes of binders. – Janice, Acreage Resident

Her husband later reiterated her fears:

> It was a very interesting process. It was intimidating. You had all of the people from Calgary with their business suits on and all the ladies in their business suits and then you had the salt of the earth, the people in the hall and they were just intimidated by it. And they started to give their testimony and it was a little bit difficult to take some of it and it was very, very technical and drawn out, and it was laborious and it was difficult until we got into the stage of our lawyer speaking and the people being able to give their submissions to the EUB. The actual folks being able to speak I think is where the real emotion came out of the Dovercourt Community Hall and I think it had some bearing on the decision made. I think the emotional content of the group as a whole helped our cause. The inadequate emergency response and evacuation certainly was the kicker in it but I think the emotional content was of great value here. – Cory, Acreage Resident

Most thought they had no hope of ever winning the case:

> We went in feeling that we had tremendously strong arguments but we also felt we were not going to be listened to. And even if we were listened to we would be ignored. We went in with a very defeatist attitude in the sense that we thought the

> best that we could hope for was a license with certain conditions that Shell would be able to meet and then it would proceed. – Paul, Acreage Resident

Despite the intimidation they persevered:

> At the hearing when people spoke, it was amazing, it was so amazing. This little lady, Maria, she was on the documentary, The Nature of Things, baking bread (…) She said, "Cory I will never ever be able to speak in front of these guys. I won't be able to do it." I said, "Yes you will. Maria you'll do just fine." And she had her turn to speak and she did terrific. The confidence that people got, the quality of things they said from the heart. – Cory, Acreage Resident

In making their case, the coalition and other interveners presented three arguments against the well. First, they contended the location of the well was inappropriate because the location of the well essentially trapped residents along the river. Second, they argued that Shell had used the wrong tools to complete the public safety risk assessment. They identified several steps in the risk assessment process where the company could have and should have employed alternative methods. Finally, they argued the emergency response plan proposed by Shell was completely wrong and would not work. Specifically, the planned escape route for residents living along the river made them go straight for the well before reaching safety.

Decision

On March 20, 2001, almost five months after the hearing, the AEUB issued its decision stating:

> that the unique combinations of the potential size and H_2S release rate of the proposed well, the limited and difficult egress from many of the area residences, in some cases towards the well, the relatively large and diverse population with a high probability to be outdoors, and the potential presence of hypersensitive individuals proximal to the well all lead to the conclusion that in the event of the

> reasonable worst-case scenario, the ERP as currently proposed by Shell cannot assure public safety (AEUB, 2001, p. 38).

"It was a wonderful victory, we all celebrated, phone lines were just buzzing," Frank reminisced. Members of the Clearwater Coalition were overjoyed.

> We got a call from one of the fellows who was at the hearing, one of the AEUB fellows, I can't remember his name. He said, "I got some news for you about the hearing." He says, "you'll be quite happy." I said, "Woooh!" And he gave me the results and wow, I couldn't believe that we had won. All, many of, well not many, a number of our neighbours just didn't want to get involved. They said, "Oh you'll never win, if the government wants that well drilled, Shell, a big company no forget it." But we persisted and they were quite surprised that we had, pleasantly surprised, a sigh of relief. – Stuart, Acreage Resident

Another resident interpreted the victory as a result of divine intervention:

> I have to say that God was on our side. When the hearing was here, it was out at the Dovercourt Community Hall and the EUB was staying in Rocky and we had snow and we had fog and we had rain and we had wind. And I asked them at a coffee break, "Have you traveled this road that they say we can go out on." And it was the Arbutis road, which the county was in the process of redoing and they had a two mile stretch there where they couldn't fix. And they said, "no," and I said, "Travel it." So they came that way on this morning when it was so horribly foggy and I think they had made up their mind right there and then, that this was over and done with. That it would never be developed. – Rhelda, Farmer

In the end many felt they were lucky:

> But having said that I think we were in the end very fortunate statistically. Very few groups, even the people down in Lochend, they didn't win. – Paul, Acreage Resident

Another resident attributed the success of the coalition to their hard work, dedication and their sincerity.

> It was the strength of the coalition because it was motivated and driven by the purest of things, anger and the fight within everyone in the coalition to stop this because it was affecting where we live. – Frank, Acreage Dweller

Celebration

After the hearing decision, one of the members of the Coalition threw a party at his local bar.

> I got champagne for everybody and I got a little sticker put on it, never doubt that a small group of dedicated people can make the difference because it's the only thing that ever has and they all got that with a bottle of champagne. And that's the truth. (…) Their passion for it was so motivated by the right reasons. This is our home, its home. – Cory, Acreage Resident

The coalition had been successful and their story was later retold in a documentary by environmentalist David Suzuki entitled 'Worst-Case Scenario' (2001). The film documented the struggle of the Clearwater coalition and in doing so brought the struggle of many rural Albertans to a national audience.

4.2.3 Findings Set A Summary

In summary, this research found two community stories describing community struggles to stop the nearby development of sour gas wells. Each composite sketch is an historical account that traces the events of each case and how they unfolded from the perspective of study participants. When examined as stories, the two cases showed both similarities in process and differences in outcome. In the next chapter, I explore what stories like these can reveal about the motivations of participants and the politics of sour gas development. But first, I move on to present the remaining findings that emerged out of an analysis of interview data: emergent story themes and story threads.

4.3 Findings Set B: Story Themes

The second set of findings from the interview data identified common themes raised by the respondents as they retold their stories about their attempts to stop sour gas from being developed near their community. These common themes show that although participants were from two different communities, faced different companies and achieved different outcomes, participants in both cases related common experiences. These experiences are organized around three categories or 'thematic dimensions': (1) identity, (2) the threat of sour gas, and (3) ideas about right and wrong.

4.3.1 Identity

The general category of identity featured prominently in the interview data. Identity is a prime ingredient of social life (Woodward, 1997). Identities are typically presented as essential (originating from the inherent character of an object, person or place) or non-essential (meaningful in relation to its opposite) (Nelson, 2001). In this sense identities underlie symbolic systems of 'same' and 'different' that allow us to 'order' others, the places where we live, and ourselves (Pile & Keith, 1993). Thus identity is a primary constituent of our sense of self, community, and place because it is the origin of belonging and exclusion (Sibley, 1995). In the interview data, two types of identity could be differentiated: place identity and social identity. As the following findings demonstrate the two were interrelated.

4.3.1.1 Place Identity

As participants recounted their experiences the setting of each conflict emerged as an important element of their stories. Identifiable patterns emerged in how participants spoke about place identity. In particular, two place identities were prominent. These included: (1) the *country place ideal* and (2) the *contaminated community*. Participants regularly communicated everyday interpretations of rurality and rural places and in so doing, evoked particular images of the 'countryside' and the 'country ideal.' The following is a typical description of what one participant described as 'west country':

> West country is being on the edge of cultivated land and having wilderness right at your doorstep. (...) I think part of the choice is a conscious choice about a smaller community. I have no interest in living in a major urban area again. I mean just the nature of daily existence is so much different here. (...) I'm on a first name basis with my doctor, my kids teacher, there's just a scale that seems to fit better, so that's a big part of the attraction as well. And even the choice to live here as opposed to in town, I mean I like the space and freedom of living on your own piece of land as well, especially when you're as isolated as we are.
>
> - Jeff, Acreage Dweller, Clearwater

In the above quote Jeff talks about his attraction to 'west country,' by which he is referring to an idyllic locale with agriculture at the front door and wilderness at the back. When speaking about their community, some participants often evoked images of the countryside commensurate with the 'country place ideal' myth. The 'country ideal' myth is the utopic perception of rural areas created through the association of the rural with elements such as agriculture, community, nature and tradition (Bunce 1994). In study interviews the *country place ideal* included elements of remoteness, proximity of nature, solitude, cleanliness, independence, and peace and quiet. Many employed the 'country ideal' in their stories by describing their locales as healthy, clean environments in opposition, or in relation to the noisy, dirty city:

> I like a lot of things...I like the fresh air and I like the quietness. I'm not a city person [laughs] I don't really like to, actually I hate going to the city, I just like the solitude and our way of life. I like the clean air and the clean living.
>
> - Nancy, Farmer, Lochend

One participant explicitly drew a distinction between the country and the city and pointed to his conscious choice not to live in an urban setting.

> It's a very beautiful area, the river, the Clearwater, is extremely unspoiled from here all the way through to Rocky Mountain House. It's a pretty, quiet area that's predominantly agricultural though there are some acreages but the acreages are people who have chosen to be here for the same reasons we have, they just don't want to live in town. - Paul, Acreage Dweller, Clearwater

For some, the locale offered a pristine, natural environment away from the congestion of urban areas, and a 'safe' place to pursue a living with easy access to recreational amenities.

> For us as farmers, it's sure crop. It's less risky to farm here than almost anywhere else in the province. Almost anywhere else in Canada except for this year…but we're still on nature's doorstep. We've got the Rocky Mountains. My boys are avid snowboarders because they've got the most wonderful natural facilities in the world here and that's why we love it and we've put a huge amount of effort into the farm. We've really enjoyed the farm for the nature side of things as much as the agricultural. - Steve, Farmer, Clearwater

One participant described the area in terms of its opportunities for leisure.

> Well I guess it offers you a lot of opportunities to do different things. You can use the river, you can canoe, and you can fish. In winter you can cross-country ski and a lot of people do use it. It's a recreational corridor that a lot of people use, including ourselves. We have a canoe and it gives you the impression when you're on it that it hasn't been touched. I know there are some areas where there are lines underneath it and so on, but generally speaking I think its one of the cleaner rivers in the area. -Paul, Acreage Dweller, Clearwater

One participant, who was severely sensitive to industrial chemicals following a toxic exposure at an industrial site, viewed his locale as critical to his very survival. His biography described his strong attachment to where he lived. His location was not only a conscious choice, but was maybe the only place he could go that would allow him to live a normal life.

> Well I think I have a great attachment for this piece of land. I've always appreciated clean air, clean air and the nature of the countryside… most of my career has been work outside and I guess I'm sort of a country person at heart. That's one thing and the other thing in a purely practical sense is that I'm absolutely dependant on clean air. I could not have recovered to the point I have right now from the chemical poisoning if I'd lived in Calgary. I couldn't even go into Calgary without wearing an activated carbon mask… I don't think I'd have ever recovered because if I was subjected to air pollution again, especially if it was long term air pollution or with peaks, I would rapidly become sick and so where in the hell would I go if I couldn't live here?
>
> \- Fred, Acreage Dweller, Lochend

Not all participants portrayed the virtues of their locales in *opposition* to urban areas, but instead talked about the *relation* between their locale and nearby urban centers. Some valued the area for its proximity to urban areas that allowed one to have the best of both worlds.

> Well it's an absolute paradise. We're ten minutes from a shopping centre but we get moose and deer running through the yard here. We counted 44 different species of birds that have come to the house. It's just a quiet place to live.
>
> \- Gerald, Acreage Dweller, Lochend

The *contaminated community* was a second prominent place identity. Group member participants regularly described how sour gas had 'tainted' certain communities in Alberta. Participants contrasted their clean, and healthy environments with what they described as polluted and contaminated communities in Alberta. In doing so, participants were communicating how they believed sour gas development might impact their community. One participant, while speaking about her concerns around air quality, described the Turner Valley region of Alberta, an area with a long history of sour gas development.

> I had concerns about quality of life in terms of the Turner Valley rotten egg smell descending upon our neighbourhood…that probably was my initial reaction. You know we're downwind from something like that and I thought if this place ends up smelling like Turner valley on a good day this is not going to make me very happy [laughing]. - Mary, Acreage Dweller, Lochend

Some participants shared stories of people living in other Alberta communities who were dealing with poor air quality and had been unable to reach any resolution.

> Pincher Creek people were talking to us…we're corresponding with them regularly…This woman called us one night and she said she's really having problems and she wanted to talk to somebody. She's got a section of land or more and she's had to move out of her home because of sour gas smells that come in her home. So she's living at the far end of her property in a cabin or in a trailer with her family. And they can't accomplish anything with the company that's the cause of it. - Ann, Acreage Dweller, Clearwater

In some interviews, participants made reference to far off places in the world that had been negatively impacted by the irresponsible behaviour of oil and gas companies, sometimes even by the same company they themselves were confronting. One farmer made reference to the international record of Shell Oil.

> Hell, a lot of us had read about their record elsewhere in the world. I mean their record in Nigeria *is just horrendous* [emphasized] and their record in Europe is not too clean. - Steve, Acreage Dweller, Clearwater

Another makes reference to Exxon Valdez disaster in Alaska.

> Prime example is the Exxon Valdez oil spill in Alaska where you know its no question that it was Exxon's freighter that spilled out oil and they made agreements for the clean up cost. It was a couple of billion dollars. They were assessed a 10 billion dollar fine and 10 years later, on a documentary on t.v. I saw they haven't paid the fine. They tied up the case in court for 10 years. So in this 10 years time they have made the interest on their ten billion by dragging it over 10 years. There's no question that they committed that crime against the environment yet they're getting away with it.
>
> - Stuart, Acreage Dweller, Clearwater

It was often the case that participants made no distinction between different types of environmental disaster or different companies. All were combined together to illustrate irresponsible corporate behaviour. Stories about contaminated communities evoked images of disaster, contaminated places and faulty environments. By telling these stories participants linked geographies of contamination and fear at local and global scales. By evoking such images, participants were contrasting their clean communities with what they could potentially become – dirty, contaminated disasters. When told alongside descriptions of the 'country idyll,' such contamination stories reaffirm basic cultural expectations of community, namely, expectations such as safety, continuity and stability. Such understandings of place were also articulated through residents' concerns about the depreciation of property values due to the proposed development and similar developments that they believed were bound to follow, 'like bad weeds.' A significant concern for participants interviewed in both cases was that the exploratory well was the first of many more. As one resident foreshadows:

> When we first moved here the only flare that we noticed were the ones quite far west of us, and now you look out, there not right in our immediate area but there popping up everywhere like bad weeds.
>
> - Ann, Acreage Dweller, Clearwater

Despite assurances by experts that land values would not change, residents still feared that land values would be negatively impacted by the 'invasion' of sour gas wells.

> Another thing that's really frightening from the point of view of people like ourselves is the impact it has on property values. They'll try and tell you no it doesn't but there's no evidence, they have absolutely no evidence that it doesn't.
> - Stuart, Acreage Dweller, Clearwater

In the following story, one acreage dweller describes the experience of a neighbour.

> There's a tiny little acreage in there created by the turn in the road. Some people came to buy it. The integrity of the real estate person obliged them to say that if you go straight across this way about half a mile, there's a proposed 32% sour gas well to be drilled. They said, "have a nice day, we're out of here." And they left. So the petroleum guys and the government telling you that sour gas wells don't have any effect on real estate is a bunch of crap. Nobody in their right mind is believing that. If I got a choice between buying a place where there's no sour gas and there is sour gas, if I got at least one screw tight in my head, I'm going where there is no sour gas, because we all know it kills people...*and it stinks* [raised pitch]. - Frank, Acreage Dweller, Clearwater

Another participant pointed to the experiences of other communities in Alberta who were faced with the stigma of sour gas development and community opposition. He described the eventual decision by one family to move out of their home and leave the area.

> I have met a lot of people like in the Caroline area, people who quietly sold up their farms and moved away because if you make a big fuss, then your land value goes down. - Fred, Acreage Dweller, Lochend

In summary, participants often drew parallels between their clean environments, contaminated communities and places across the province and around the world, and the proposals to drill for sour gas. By evoking the contaminated community place identity participants raised precedents of contamination that tainted environments and disrupted lives and spoke to their fears of what could become of their community if the developments were to be approved. When described alongside the 'country place ideal,' place expectations such as stability, continuity, coherence and safety were highlighted.

4.3.1.2 Social Identity

As participants recounted their stories their self-perceptions were important. Identifiable patterns emerged in how some participants spoke about social identity. In particular three identities were prominent. These included: (1) *country people*, (2) *resisters* and (3) *victims.* The perception of rural places as autonomous and distinct from urban areas was connected to personal identity (Ching & Creed, 2000). Just as 'city people' belong to cities, rural people are defined by their place in the country. Many respondents identified themselves as *country people* living the country lifestyle, which for them translated as a high degree of self-determination and control. Participants believed their locale granted them the freedom to be themselves and the opportunity to live healthy, meaningful lives in a 'scaled down' community. Participants were either born into the community or found it later in life. Some identified themselves as farmers or ranchers with longstanding ties to the region:

> I've lived near here since I was nine years old. My parents moved here from north of Hanna Alberta in 1946 and they just lived three miles down the valley, and my husband and I have lived here on this place for twenty-nine years. We've always been ranchers and the whole family are ranchers and farmers.
>
> -Nancy, Farmer, Lochend

Farmers and ranchers communicated a strong attachment to their land that for some stretched back for generations. Farmers and ranchers expressed a strong sense of heritage and pride in providing what they perceived as an important collective 'good': a clean and healthy food source.

> We don't feed our cattle hormones, we look after them the best we can to give clean meat to the people…once any person or anybody disrespects the primary producers of a country there is no country. – Mrs. Natural[16], Farmer, Clearwater

Others identified themselves as ex-urbanites who had moved to the country to escape the trappings of the city and in search of a better quality of life:

> I'm a city bred guy. I was born and grew up in Edmonton and had lived my life in Edmonton until I moved here. Both Shelley and I are social workers by training. When I moved here I'd bought property, I'd bought this piece of property as recreational property without the intention of living here but I was spending forty to forty-five weekends a year here and pretty soon decided this is where I wanted to live and so moved here with the intention that the choice was going to be about home and not about work and that work would fit in to what opportunities existed here. (...) And you know there are some costs associated with that but again it goes back to the decision that you know I want to live here. This is home, so you do whatever you do to make that kind of feasible or doable.
>
> -Jeff, Acreage Dweller, Clearwater

Farmer or ex-urbanite, all identified themselves as country people and communicated a conscious desire to live a 'good' life in the countryside in one way or another. A 'country person' has the space, literally and figuratively, to do what one wants. A country person values a close relationship with nature, and, in the case of the ex-urbanite, has made a conscious choice to live in a 'scaled down' community. Being a country person meant having the freedom to be 'themselves':

> I'm a country person and it wouldn't matter where I was in Alberta…I think. When I got off the plane in 1958 in Calgary, I had no intention of staying. I was only coming as a teacher, and it was good money and I was going to come and have a look at the country for three years and then I was going to come back. But

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[16] This pseudonym was chosen at the request of the interviewee.

> I got off that plane and I saw those Rocky Mountains and that was it, you know? I mean I'm staying here…it's the freedom to be yourself.
>
> - Rhelda, Farmer, Clearwater

The "freedom to be oneself," or local autonomy and self-determination were identified by some as a source of value and wealth. As one acreage dweller recounts, his location in Clearwater, once found, figured positively into his experience of raising a family. For him, the area was a touchstone and foundation for the growth of his family.

> In the course of 26 years, our life down on the Clearwater has been beautiful. I've described it to people as wealth. I'm a wealthy man. I just don't have any money. When I speak of that, I speak of where we live and the quality of life that we were able to find and enjoy. So subsequently to us moving down there we had two other children, a son and the youngest daughter Nicole. They grew up on the Clearwater where we live, building tree forts and tree houses and playing down at the river, just enjoying their youth in a really natural setting. I was fortunate working in the oil industry that I was able to make a good living. My wife stayed at home with the children for ten years and that was very rewarding for us as parents. So we came to really love it and I know that our children love where we live. Its been quality, quality and wealth in my 26 years here…It's just home. It's touchstone, its roots, its what our children know and again we're wealthy for the experience to do that. -Cory, Acreage Dweller, Clearwater

A second social identity that featured prominently was the identity of the *resister*. Some participants constructed the 'resister' identity by discussing the stigma of being negatively labelled a 'radical,' the contradiction of simultaneously opposing and benefiting from sour gas, and the related experience of community exclusion. Many participants perceived that as a result of their actions they had been labelled 'environmentalists' or 'radicals.' Some participants felt that such a label was perceived negatively in Alberta. Some embraced the identity, while the majority resisted being labelled a 'radical.'

> What really bothers me is that as an outcome of this, I'm labelled now. I'm a radical. *I'm not a radical* [raised pitch]. I'm just bloody angry that people think our safety is not a concern. And so I was approached by a guy yesterday when they were putting in this well. 'Oh by the way would you consent to having us spreading the drilling mud on the land?' he said. I said, 'not on your Nelly!' 'Why not?,' he said. I said, 'well haven't you read the latest research, it makes the soil non-porous.' 'Oh I haven't seen that' he said. But you can see [laughs] I was labelled there, 'oh its him.' And that bothers me because now I have been pigeon-holed into a position and certainly the oil industry pictures most of us guys on the committee as you know, closet Wiebo Ludwigs. –Steve, Farmer, Clearwater

It was evident that a certain degree of stigma was attached to activism, individual and collective, against oil and gas development. Many participants made reference to concurrent and continuing incidents of industrial sabotage taking place in Alberta, most often associated with Weibo Ludwig[17]. Some participants regularly tried to disassociate themselves from the 'Weibo' story. Some felt that their actions (motivated by 'pure' intentions) were conflated with the violent eco-terrorism that was happening at roughly the same time. One participant explicitly pointed out her opposition to any kind of 'environmentalism.'

> I'm not happy to be seen as an environmental protestor because as I said I've spent most of my life bitching about environmental protestors [laughs].
>
> -Mary, Acreage Dweller, Lochend

A second but related way the *resister* identity was talked about related to the 'positionality' or the community politics of resisting sour gas development in Alberta, *as an Albertan*. Some participants struggled to reconcile their newfound identities as sour gas resisters with their identity as an Albertan. Some members of the community groups were employed in the oil and gas industry and had to negotiate their dual position: opposing sour gas development near their homes while simultaneously receiving direct or indirect benefits from sour gas development.

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[17] Weibo Ludwig, a farmer living in Hythe, Alberta, was convicted of a series of oil field bombings that occurred in the late 1990s. The bombings followed a long, acrimonious battle with a local oil and gas company over sour gas wells on his property.

> I took a lot flack working at Amoco from my co-workers and from the company for the stand that we were taking. I was talking and a lot of people kept questioning, "Why are you doing this?" "Why are you doing this?" And I said, "because I have to do this." It's a question of respect. It's a question of violation here you know? I'm not against what I make a living at or what we all do here and its what drives the Alberta economy to a great extent. I'm against this particular well. - Cory, Acreage Dweller, Clearwater

Many farmers and ranchers already received compensation for existing oil and gas development on their land. While taking action against the proposed well, some felt they had to "straddle the fence" so as to avoid conflicting with their neighbours and in some cases, their own interests.

> At that time I was still busy in the oil patch…so I was kind of stepping out on a limb as far as sour gas drillers looking for my services. But I hadn't done a lot of work for sour gas anyways other than the work I did with sour gas surveys. But I was kind of wearing two hats. - Gerald, Acreage Dweller, Lochend

This climate forced residents to somehow rationalize their opposition in light of the dual position they occupied. Many did so by pointing to the particularity of the fight and went to lengths to convey that they were not opposed to oil and gas in general. However, group members still perceived an implicit condemnation of their actions. Some believed government institutions shared this condemnation. One acreage dweller describes the AEUB's response.

> There was a real backhanded attack on us, which was directed towards our lawyer suggesting that the hearing could have been made shorter if there had been better

> communication between them. And then they tried to really hammer us on expenses for some of the expert witnesses and it was as much as saying to the expert witnesses, "you better think twice before you represent people on the other side." So I felt the board gave us what we were asking for but sent a message to our expert witnesses and also to our lawyer that they better think twice before they agree to do this. - Paul, Acreage Dweller, Clearwater

For some, a part of resisting was the fear of community exclusion. While working to raise concerns around the risks of the proposed development, organizers encountered an implicit resistance to speak out against the oil and gas industry within their own community because of a fear of being blacklisted for 'acting out of place.' Many understood that some residents, despite being at risk, could lose their jobs for taking a stand against the wells. Some participants mentioned individuals who did lose jobs because of the stand they took.

> So, we're at a disadvantage right off the bat… there are a lot of people round here who have, or in some way or another [sic], work for an oil company, whether it's a lowly deck hand on a rig or whether they supply tools or something, they didn't say a word because they'll get blacklisted. -Rhelda, Farmer, Clearwater

Given the dependence on oil and gas in the region, the feeling among some participants was that their actions carried the threat of being shut out of potential employment opportunities or being labelled as selfish, irrational, and a 'radical.' This culminated in a sense of being outside the community. However, following the success in the Clearwater case, many participants received thanks from neighbours who did not openly participate.

A final social identity that featured prominently in interviews with study participants was the identity of the victim. While recounting their stories, it was common for some participants to describe processes of victimization by relating experiences, some personal, of sour gas exposure. Victims of sour gas exposure were often residents who were knowingly or unknowingly exposed to sour gas as a result of an accident or regular flaring practices.

> That whole area is one of the biggest sour gas fields and I remember one particular incident. I have a brother-in-law who lives not far from the place where we used to live and they came and got all the people up along the Yankee Valley road in the middle of the night. Gas masks on and whipping them out of bed and at one particular place, and I know this is true she was my children's music teacher, their cat was dead on the back door step.
>
> - Tammy, Farmer, Lochend

In this story, a family had the security of their home and health transgressed. Often, people are made victims by more than just sour gas exposure. In some cases, they are victims of the failure of other social actors (emergency response teams in this case) to live up to their responsibility.

> One other women that I talked to said she's been gassed a couple of times and one time the emergency response were going to come out and save her and she said they phoned back and said they weren't coming [laughs] because these people, the emergency response people, they don't want to get gassed either. Like how many people in Rocky would actually come here if there was 35 % gas leaking all over the place? How many would come? Who would want to take that risk? They'd wait until the gas dispersed and then they'd come find you dead basically.
>
> - Anne, Acreage Dweller, Clearwater

4.3.2 Threat of Sour Gas

Central to participant accounts of the siting conflicts were appraisals of the risks associated with drilling for gas deposits and operating gas facilities. Identifiable patterns emerged in how participants spoke about the risk of sour gas development. In particular three themes about risk were prominent. These included: (1) *threats to quality of life*, (2) *uncertainty, and* (3) *mistrust*. The most obvious dangers communicated in interviews were threats to human and cattle health from chronic or catastrophic sour gas exposures. When describing sour gas development some participants emphasized the highly poisonous and toxic nature of sour gas. One farmer shared the following story about living next to a sour well that flared continuously.

> We have a well on our place. We bought the neighbouring quarter and the well was actually on the neighbouring quarter and it went in before we bought it and they flared that well for somewhere around six weeks full bore. We were never asked; we were never given any information what was in the flaring. Some months later we started having deformed pigs born and there was a period there where we had deformed baby pigs and later on that same year in the calving season we had deformed calves. We had a calf born alive with no lower jaw, ears coming out of its eyes, and we didn't put two and two together. But when you start reading as we have done, I think there is a connection. And so you know the more of that kind of thing that we read we realize, hey this is a huge concern because we can't get away from it. Following that both our boys came down with asthma in the same week, and we've never had asthma in either of my wife's side of the family nor my side. So we said, "*hey* [raised pitch], there's something going on."
>
> - Steve, Farmer, Clearwater

Another farmer describes a past experience of living next to a sour gas plant.

> Our house and our ranch buildings sat in a lower spot because of course when they homesteaded they always built by a creek or a spring or something *so that when they let that crap* [strong emphasis], whatever they let go, out of the plant, and they always did it in the middle of the night, we'd wake up in the morning with our eyes watering and our noses just absolutely full of the smell of sulphur. You'd go outside and it would be gone because a breeze or something had come up. And I had two of my children with severe, oh what did they say it was, it was a chest condition. They both ended up getting their tonsils out in the end. I mean

> *constant croup* [raised pitch] *when they were little*. Now that may have been a bit genetic. I guess my husband had that as a child too, *but* [strong emphasis] you just always wonder [laughing]. - Tammy, Farmer, Lochend

Some participants expressed frustration at the fact that industry, authorities and neighbours often downplayed the threat of sour gas. One participant shared a friend's experience of watching an accident on a sour gas work site.

> I've got a scouting friend of mine who related a situation to me where he was scouting out towards the Ram River or somewhere in a sour gas area and he was up on a high, high hill (…) and he was sitting up there and all of a sudden heard the warning thing go off and watched everybody leaving the rig and running down a valley towards the campsite. He said the last guy went down, and pretty soon the second last guy went down and he didn't know what was happening because there is no smell, you know you can't see it. And then the engineer came up to him and said they had a little whiff of sour gas. A little whiff that knocked two guys out? - Gerald, Acreage Dweller, Lochend

In this story the engineer downplays the apparent seriousness of the event to the disbelief of the teller. Another participant shared a short story about a neighbour's response to the risks of sour gas.

> There is no research going on, on the cumulative effects of this stuff. When my neighbour, my direct neighbor who's made his fortune out of oil and gas, says to me, "well I've been around oil and gas all my life." Yes you have, but when you started out your life with oil and gas there wasn't the level of emissions there is now. Your'e putting your children into that level now. What are you exposing them to? *Nobody knows* [raised pitch]. - Steve, Farmer, Clearwater

In this story the teller expresses frustration with the lack of social consensus – or disenssus - regarding the risks of sour gas (Edelstein, 1988). While the participants in this research saw sour gas flaring emissions as an urgent social problem, others – like the neighbour discussed in the quote above – were dismissive.

A second way participants spoke about the risks of sour gas development was in reference to the *uncertainty* regarding links between exposures and health outcomes. Uncertainty disrupts the 'ontological security' individuals seek in their lives (Giddens 1994). Ontological security stands for the background assumptions about everyday life that preserve stability and continuity in the face of chaos and uncertainty (Giddens 1994). It was common for participants to end stories about sour gas risks with the rhetorical question found in the last line of the above story ('What are you exposing them to? Nobody knows'). These questions represent the high level of uncertainty that residents struggled to manage:

> We're working right now next to the Shell Ferrier gas plant and the smells coming out of there are [deep groan]. *Twice* [raised pitch] last week bailing, I thought I was on fire. And I got out and it was coming from [the Shell plant]. So these things are coming out *and nobody knows what's in them* [raised pitch].
>
> - Steve, Farmer, Clearwater

Through phrases such as, "What are you exposing them to, nobody knows", or, "but you just always wonder," experiences of ambiguity, mystery and uncertainty were communicated. As well, it was common for participants not to draw an explicit connection between sour gas hazards and health outcomes. Myself as the listener was positioned to draw the connection. The story below was told by an acreage dweller. It describes her struggle to negotiate the burden of proof needed to establish a link between her son's coma and sour gas exposure. This story evokes elements of ambiguity and mystery to convey the uncertainty that she had to negotiate while trying to uncover the cause of her son's illness. The story also touches upon some of the dangers already discussed.

> The youngest one, the one I was pregnant with, he's become an electrician working for the oilfield and he started working in sour gas conditions and mysteriously went into a coma after working 16 hours a day out in the oilfield You know I talked to his boss afterwards because at the time when he went into this coma we just didn't have a clue about sour gas and it's only after we started finding out what it can do to you that I started thinking back to the symptoms that he was relating to us when he was working there; the sore eyes, his cranky nature and that sort of thing. And then I thought well maybe he had some kind of low-level exposure to sour gas because when he went into the coma they took him to U of C and they did all kinds of tests on him. Like 13 doctors checked him out and they said, "Well he shows signs of something toxic in his liver but we don't know what it is." And when I phoned up his boss you know a year later I said, "Do you think he might have had a reaction to working with sour gas?" He said, "Well no, I work side by side with him, you know, like if I don't get it why does he get it?" But the thing is some people are more sensitive, you know? Its just like you might be sensitive to cologne but I'm not. And because of his exposure when he was just a fetus, that could make him more sensitive to sour gas at lower levels and we wouldn't even know that. So that's why they should be doing studies to see how it affects us. - Ann, Acreage Dweller, Clearwater

In the following story, the teller recounts a family's struggle to deal with emissions from a nearby sour gas plant. Like other stories about sour gas exposures, this one makes an ambiguous connection between the gas plant and the daughter's illness. At the end, the teller hints at some sort of conspiracy by suggesting someone, somewhere is withholding information.

> Okay I came to this country in 1958 from England. I came to the Pincher Creek area actually to Gladstone Valley, and I immediately got thrown into all this controversy because they had just built the Shell gas plant at Pincher Creek a couple of years before that and people were starting to have problems with their cattle and their herd. In fact, I had one family who had to move into town every

> spring because their daughter, not their other children, just their daughter, got deathly ill in the spring and they swore it was this plant. And that is what I find so frustrating and is probably in the last few years, especially since they started this one here, really spiked my interest because they were doing health research studies back in 1958 [emphasized] and they have still never come to any conclusions since then and yet we all know that they must have. - Rhelda, Farmer, Clearwater

Over and over again participants employed stories and phrases that conveyed uncertainty and implicit causal connections.

A third way participants' spoke about the risks of sour gas development was in terms of *mistrust*. Participants often discussed the risk of sour gas development alongside the trustworthiness of sour gas operators and regulators. When describing their struggle against Canadian 88 and Shell many argued that the companies had manipulated information to support corporate interests in drilling the well. This included manipulating the emergency response plans (ERPs) required by provincial regulators.

> There's formulas to figure out a whole bunch of stuff with regard to drilling sour gas wells and there is a formula to ascertain the size of an emergency response plan area according to the amount of sour gas that's supposed to be in the ground when they drill. Now, according to the amount of sour gas that was here that thing was supposed to be somewhere between 13 and 14 km. And they shrunk it to four km. You can imagine what we thought when we found they shrank it to four because they can't manage the people in the 14 km one. Like I don't care you better figure out a way to manage it. That was a huge source of annoyance to everybody.
>
> - Frank, Acreage Dweller, Clearwater

One participant described this type of behaviour as "a transgression of policy" (Paul, Acreage Dweller, Clearwater). Many felt such a circumvention of policy was deliberate and served to reduce the number of landowners companies had to deal with, which in effect excluded many from the protection of the ERPs. For example, several landowners were excluded from the public consultation and did not receive an information package:

> I did not get a package and it turned out that Shell saw fit to reduce the emergency response zone to something that they thought was more convenient for administration so because I was outside that immediate zone we didn't even get a package [lowered tone], and yet our farm was directly down wind from where the well would have been, in fact, we would have been impacted more than most.
>
> - Steve, Acreage Dweller, Clearwater

Such exclusions were interpreted as dishonest and intentional.

> It was hard to describe your emotions sitting they're listening to everything, it was almost like Shell was lying and what could we say?
>
> - Janice, Acreage Dweller, Clearwater

The scope of mistrust extended beyond oil companies operating in the area to include other institutions such as the provincial regulators of oil and gas, the AEUB. Some residents drew little distinction between the companies and the provincial government when implicating groups in dishonest behaviour. One woman voiced her strong feelings relating to the position of companies and provincial regulators on sour gas.

> I really don't appreciate being lied to and deceived. There is so much information on the toxicity of gas and sour gas that I listen to that and I feel that it's nothing but deception. I feel the government, and industry are intentionally deceiving the people. I feel they are intentionally deceiving us so they can take our resources without having to pay us for any damages, right?
>
> - Mrs. Natural, Acreage Dwellers, Clearwater

Uncertainty and mistrust combined to fuel a deep sense of insecurity and vulnerability. As one participant poignantly described:

> You try and insulate yourself from things you don't want to be a part of but you become very conscious of the fact that there is no protection from these problems. It really made me feel extremely vulnerable and as if my own space, because *it was coming in the air* [raised pitch] for heavens sake, and not only that but they're gonna go in the ground, it's a given that your groundwater is going to be contaminated, there's nowhere to run. – Paul, Acreage Dweller, Clearwater

4.3.3 Ideas of Right and Wrong

As participants recounted events identifiable patterns emerged in how participants spoke about sour gas development as they related to ideas of right and wrong. Moral perspectives were articulated by: (1) *blaming culprits*, (2) *citing acts of responsible and irresponsible behaviour*, and (3) employing *the discourse of rights*.

It was common for participants to signal that a norm or value had been violated through *blaming*. When doing so, participants made direct causal connections between actions and consequences. The most common blaming practice was when participants blamed standard industry practices such as flaring for health problems and property damage. In the following passage, one woman describes photographs that she had brought with her to the interview showing fog around her home.

> This is the problem. During the day they flare all of this into the sky. Then at night when the air pressure comes down the sky falls and it brings it down and it blankets us. Then we end up in this which we call death fog. This is actually full of pollutants, it is not clear fog. It is the kind that causes nausea and headaches for me and other people. – Mrs. Natural, Acreage Dwellers, Clearwater

Many stories functioned to blame the oil and gas industry. In these stories the industry was referred to simply as 'they' and subsequently labelled as the guilty party responsible for an array of health problems associated with chemical exposures.

Participants also spoke about right and wrong in terms of notions of *responsible and irresponsible behaviour*. It was common for some stories to centre on examples of sour gas operators acting irresponsibly. Such acts were judged against basic community values that included keeping public spaces clean, following rules, and being 'good' neighbours. One respondent shared what she described as common industry practice – breaking the rules.

> They flare at night when people are supposedly in their homes and maybe wouldn't have the same effect and some nights when I wake up I feel I can't breath. The air feels like I can't breathe and so I go to the window and I'm thinking the air is going to be fresh and I'm gulping air and it doesn't feel any better… they do that in the middle of the night when everybody is inside. They do their little venting and sometimes illegal flaring. - Ann, Acreage Dweller, Clearwater

Throughout the interviews stories were used to blame and make claims of responsibility. They often cast oil companies as culprits or villains. Victims, villains, and blame were common themes that were used to talk about responsibility. One resident illustrated how blaming practices and notions of irresponsibility overlapped:

> I work in town and I was driving this girl to Sundre and she was only fifteen years old and I was talking about the gas problem, you know, fighting with oil and gas companies. And she lived on a farm in Sundre and she said, "I know exactly what you're talking about." And she's only fifteen years old. She says, "One year in Sundre here we had yellow snow." And she lived on a farm and she wants to be a vet so she knows about animals and cattle, and she said, "One of the oil companies offered my Dad fifteen thousand dollars but if he took the money he wouldn't be able to say anything." It was a muzzle contract, just for fifteen thousand dollars and she said, "That's the way they work." She said, "That year the snow was all yellow," she said, "lung worm, the whole herd got infected with lung worm." And then she said, "Some cows had cancerous lumps on their neck

> and it was determined that it was due to the toxins in the air," and that's what fifteen thousand dollars was all about and they just wanted to cover that up.
>
> - Ann, Acreage Dweller, Clearwater

The passage describes a situation involving 'muzzle contracts,' 'gag orders' or 'confidentiality agreements' and evaluates such actions as strategies 'to cover up the truth' and circumvent wider responsibility for health impacts of flaring. Furthermore, the company offered compensation but at a cost. This cost came at the price of the protagonists' ability to be a good citizen: someone who can warn others in the community of danger. This speaks to the perception held by many participants that oil and gas companies work against the 'good' of community. Similarly, in the early stages of mobilization in Clearwater (as discussed on page 103), a couple from nearby Caroline attended a meeting with Clearwater residents. Their story epitomized the irresponsibility described above. One resident told it as follows:

> Tammy and Bill O'Neil, I don't know if you heard their story, but they'd be people to talk to. They have a farm around Caroline and their cattle were very sick. This happened years ago. They had a sour gas well on their property and their cattle became very sick and he lost a lot of his herd and *they* wouldn't take responsibility for it. They told him, 'oh its your cattle.' And he said, 'no I had a healthy herd!' B*ut there was a leak* [lowered volume]. There was a leak into a creek on their property and it was very sad. He came to one of our first meetings *and he cried* [raised pitch]. *He started to cry.* He's in his fifties and they were ready to lose everything and I could understand after going through the process. I could understand what he went through. Like we feel we were pushed into a corner and here's this poor man who's fighting the system and his cattle are dying. –Janice, Acreage Dweller, Clearwater

The above passage highlights themes of victimization, blame and responsibility. A farmer is the victim of negligent behaviour and has struggled to hold the culprits responsible. While defining the conduct of the oil company as careless, and portraying the couple as victims, this story reaffirms community ideals regarding responsibility to others, justice, and delineates when it is acceptable to resist.

Not all references to responsibility were negative. Some participants cited positive examples of oil and gas operators who conducted themselves responsibly.

> There's a fellow from Mobil and you can't imagine the things that Mobil Oil does for them, *you can't imagine* [quietly]. They have roads, they have dams, they have cattle guards, they are paid to move the families out when they are drilling…and those are only level I and level II, those are not level IV. My nephew and his wife live just half a mile from where they drilled a new well and they got a hundred dollars a day for ten days. – Tammy, Farmer, Lochend

This passage suggests that 'compensation' is a just and appropriate response to wrongdoing. Accounts such as this were important because they highlighted community ideals about fairness and responsible behavior as well as what the community expected from oil and gas operators.

A final way participants spoke about ideas of right and wrong was through the *discourse of rights*. It was common for participants to discuss sour gas development in terms of the individual 'rights' to private property held by landowners and the 'rights' to sub-surface mineral deposits granted to oil companies by the province or 'free-hold' mineral holders. As one participant described:

> Nobody seems to have contested the right of the surface property owner to enjoy his property without interference. These boys come in and say well we have subsurface rights, so you do, but why do your subsurface rights supersede my above ground rights? - Steve, Clearwater, Farmer

To answer such questions some participants widened the discussion to include the realm of law.

> You feel utterly powerless because the way the law is written the oil company has the right to the mineral reserves and the landowner has the surface rights and in order to access those mineral rights the oil company has a right to enter your property…mineral rights override the surface rights. – Paul, Clearwater, Acreage Owner

In one interview a participant brought along a copy of the *Canadian Charter of Rights and Freedoms*. She used it to illustrate her contention that pollution from oil and gas operations violate the basic human rights guaranteed by the charter and the government.

> We have a right to life and the right to breathe and exist.
>
> – Mrs. Natural, Clearwater, Farmer

Understandings of collective, common 'goods' such as clean air, a safe environment, community and the right to enjoy one's private property, were articulated through the discourse of *rights* and were key themes that shaped how participants evaluated the behaviour of oil and gas operators.

4.3.4 Findings Set B Summary

This section has presented the second set of findings that emerged from a thematic analysis of participant's accounts of the siting conflict. These findings show that although participants faced two different companies in two different communities, they shared common experiences. For participants in both cases, place identity served as an important source of personal identity. Participants made connections between the 'idealized country landscape' and the ability to pursue healthy, 'good' lives. Participants conflated environmental disasters at varying geographical scales to communicate their fears regarding what could happen to their quality of life and communities if the proposals to drill sour gas were to be approved. Participants in both cases made implicit and explicit connections between sour gas development and poor health and evaluated the idea of drilling for sour gas in their neighbourhood in relation to the perceived trustworthiness of oil and gas companies and their corporate respect for individual rights.

4.4 Findings Set C: Story Threads

The first set of findings consisted of a retelling of what happened in each community – the community story. The second set of findings identified common themes used by participants during interviews. Themes were identified and grouped into thematic categories. The third set of findings builds on the first and second by showing that respondents showed similarities not only in *what* they had to say (themes), but important similarities in *how* they chose to communicate their ideas. On one hand each participant recounted the 'factual,' community story of the overall conflict (composite sketches). On the other hand, each participant also told stories about his or her experiences related to how each individual reacted to the well and the siting process. Given their interlocking nature, I call the different types of storylines used in interviews *story threads*.

4.4.1 Story Threads: Conduct Stories, Stigma Stories, Horror Stories and Life Stories

Four story threads emerged from the interview data. I have named these the conduct story, the stigma story, the horror story and the life story. The conduct story detailed mistrust from collective understandings of past bad behaviours. The stigma story detailed how someone or some place is negatively labelled. The horror story detailed past exposures to sour gas and the consequences. Finally, the life story detailed how each individual developed their strong attachments to their home. A summary and example of each is given below.

4.4.1.1 Thread 1: Conduct Story

While telling stories participants often shared experiences about oil companies' disregard for local norms and community well-being. I call this story thread a conduct story because it talked about behaviour and communicated ideas such as mistrust, blame, irresponsibility and the contravention of landowner rights. Specifically, conduct stories communicated a deep sense of mistrust of the oil and gas industry and the government of Alberta. Conduct stories typically portrayed industry as lacking respect and regard for individual and community well-being. In the following conduct story, a participant recounts an experience her brother had dealing with consultants hired by an oil company. The story highlights what the teller perceived as an explicit attempt to hide evidence that a well had polluted the surrounding soil:

> My brother farms at Irricana which is about another 19 or so miles east and north of where we were again. And they came out there with a little tester thing and they set it out in this pasture and they were going to leave it out there all summer. So my brother was riding by one day checking the cows and here the fellow was folding it all up and taking it away and he said, "oh I thought you were leaving that here all summer." "Oh no, no", he said. "We're finished." And John said, "well what was the result of the test?" "Well," he said, "I'm not allowed to tell you but I will tell you one thing Mr. Hendricks...you will never need to add sulphur to your soil." [laughing] So I know these are not isolated incidents.
>
> - Tammy, Farmer, Lochend

This story thread communicates mistrust, irresponsibility, and blame. In doing so, conduct stories reaffirmed beliefs in how a community ought to function. Conduct stories outlined community expectations of how others should treat 'us' (trust) and the obligation to grant the same to others (loyalty). Conduct stories were important because through the process of identifying culprits, villains, allies and antagonists, conduct stories reaffirmed norms that served as the basis for how participants saw their community (Douglas, 1967; Douglas & Wildavsky, 1982).

4.4.1.2 Thread 2: Stigma Story

A person, object, action or place may be labelled deviant or stigmatized when it breaks group norms for behaviour or is banned from full social acceptance (Goffman, 1974). Therefore stigma stories are those narratives that talk about the application of negative labels to people or places. Actions associated with activism bore a certain stigma that plagued participants before, during, and after the siting process. Stigma stories communicated stigma experiences and communicated the challenge of negotiating multiple social identities, resisting the 'radical' identity and being blacklisted. Stigma stories also described the labelling of some communities in Alberta as contaminated and faulty environments. In the following stigma story, a participant describes a personal experience she had when she visited a doctor to seek help for an ailment. She uses the story to illustrate how claims of environmental illness are often dismissed and patients are labelled as irrational:

> If I go to the hospital and I am really, really sick and I say, "Oh geez I don't know how come I'm so sick." They will help me. If I go in and I say, "There's a flare across there"... I have had the most professional, nice looking Doctor laugh in my face. He [Mr. Natural] was right there, I had been sick for days and he took me into the hospital. I told this doctor that I was responding to the flare. He laughed at me and refused to help me. I ended up going to Red Deer and x-rays showed that there was a problem. My sinuses were swollen right up. But the doctors here, they just ignore you. It's a really sad day in Alberta, it really is.
>
> – Mrs. Natural, Farmer, Clearwater

In this story the participant reported that her symptoms were discounted after suggesting they might be linked to a nearby well. The story touches on the stigma many Albertan's face when they attempt to link illness with sour gas development (Epp & Whitson, 2001; Keeling, 2001; Marr-Laing & Severson-Baker, 1999; Nikiforuk, 2001). In short, the stigma story reflected how participants believed a community ought to function. Being labelled, excluded and placed on the periphery of one's community was a painful and destabilizing experience and stood in contradiction to how participants believed an ideal community should function. This story thread reaffirms the value of solidarity, the willingness to care for other people's interests even when in conflict with one's own, in regards to community cohesion. In other words, in an ideal community, sour gas proponents would privilege the well-being of community members even if this was to conflict with their own stakes in the oil and gas economy.

4.4.1.3 Thread 3: Horror Story

Participants interwove personal accounts of exposure to sour gas and the resultant life disruption through a story thread I call the horror story. Horror stories articulate how exposures to sour gas were an affront to the order and security of participant's lives. Horror stories communicated the dangers to health and safety, uncertainty, ambiguity, mystery and victimization. Horror stories followed a general storyline: somebody somewhere is unknowingly exposed to sour gas and are subsequently unable to attain justice. Tension-creating disturbances to individual or community well being centering on the physical threats of sour gas exposure underlie the basic storyline. In the following horror story thread a participant describes the personal experience of being exposed to sour gas:

> We're quite sensitive to the smell of H_2S from our experience going back to the first ever sour gas blowout in Alberta at Lodgepole. For the first one we were living and teachers at the Sunchild O'Chiese Reserve. That first gas well… nobody knew anything about sour gas or how it affects people.
> It blew in the middle of the night in December. So the schoolyard and our home just started filling up with sour gas. So I called the utilities board and said, "You know I'm getting worried because we're smelling this thing and its burning my nostrils and I'm losing my sense of smell and we couldn't get away from it." And they said, "Oh well we'll bring a monitoring trailer in the schoolyard." (…) But the wind was blowing in our direction so for about a month we lived with that for 24 hours a day. I kept calling back saying, "What are the levels of this gas, is this okay?" And they kept saying, "We got the monitoring trailer and somebody's monitoring it." So about a month later they put it out (the well) and so on. So during the hearing I finally got a transcript of the hearing on the 1978 Lodgepole blowout (…) and they mentioned Sunchild O'Chiese. There was a problem with the monitoring station in the schoolyard. It was incorrectly reported as being o.k. (…) so there was probably more than 3 parts per million or whatever. So maybe I could sue Amoco. (…) I've had health problems, which you know maybe they're related, maybe not. – Ann, Acreage Dweller, Clearwater

With horror stories, participants implied the suffering of community members that *could* occur again without community action. Horror stories made points about danger, uncertainty and vulnerability. However, in doing so they also reaffirmed community values such as health, safety, and well-being. These qualities were considered as bedrocks of a good community. By telling stories about terrible events, horror threads reaffirmed collective aspirations to good lives in a healthy and safe community. In describing accidents and catastrophes, horror stories alluded to the failure of institutional actors to carry out their responsibilities and for this reason horror stories are closely related to the conduct story.

4.4.1.4 Thread 4: Life Story

In each interview, at one point or another, participants shared whole or parts of their personal biographies. Participants often injected storied fragments about themselves either in direct response to one of the preliminary questions ("Can you tell me a little bit about yourself?") or else sporadically as they recounted episodes of the cases under study. These 'life stories' or autobiographical accounts chronicled lives as a series of past events, happenings, and decisions. In the process, autobiographies articulated how the past was related to the present, and in so doing participants traced aspects of place, identity and community.

The life stories shared in interviews tell how participants had come to find their place. Participants had inherited or consciously made the countryside their home and in the process had fashioned past and present identities. The identity of 'country people' – people with the space to be who they want to be – and the 'country place ideal' - elements of remoteness, proximity of nature, solitude, cleanliness, independence, and peace and quiet – and the drawing of rural/urban distinctions all figured into the conscious attempts of residents to pursue healthy, meaningful lives. Thus participants highlighted an 'aesthetic of community' that celebrated close neighbourly relations and an embeddedness in place:

> We've lived in Rocky Mountain House for 26 years now. I moved here from Quesnel, B.C. I'm a native Albertan. Born and raised in Calgary, my wife was born in Calgary, my mother was born in Calgary and my grandfather came there in 1890, so we're Albertans. We've been around for a while and discovered the Rocky area years before we ever moved here. We had an opportunity to move here and get in the oil business 26 years ago and were delighted to move here and start a family. Bought a piece of land down on the Clearwater, it was all trees and was pretty rough going at first. In the course of the 26 years our life down on the Clearwater has been beautiful. – Cory, Acreage Dweller, Clearwater

As illustrated in the above story, aside from tracing how each individual had come to live in their respective community and what the locale meant to them, life stories also implicitly affirmed collective values and beliefs held by participants. In particular, the life story thread affirmed values such as order, continuity and control. The life story thread showed how the quest live the 'good life' boiled down to being in control of one's surroundings, having the freedom to make decisions about one's life and preserving continuity in aspects such as family and the home.

4.4.2 Identifying and Comparing Story Threads

Each story thread above was identified using four criteria: (1) the personal experiences they communicated, (2) the thematic dimension of these experiences, (3) the common emergent themes communicated in the interviews and (4) the community values and beliefs they displayed (Table 4.1). Beginning with the first criteria, each story thread communicated a type of personal experience. For example, conduct stories centred upon the behaviour of oil and gas proponents. Stigma stories focused on experiences of labelling and social exclusion. Horror stories focused on first hand and second hand experiences of sour gas exposure while life stories centred on the personal experience of finding one's 'place in the world,' literally and figuratively.

Table 4.1 Story Threads

Story Threads	*Personal Experience*	*Thematic Dimension*	*Emergent Themes*	*Community Values*
Conduct Story	• the conduct of the oil and gas industry	Ideas of Right and Wrong	• Blame • Irresponsibility • Mistrust • Rights and Duties	• Loyalty • Duty • Trust
Stigma Story	• individual and community labelling and exclusion	Identity	• Resisters • Contaminated Communities	• Community Acceptance • Solidarity • Belonging
Horror Story	• past, personal and second hand experience with sour gas	Threat of Sour Gas	• Threats to Health and Safety • Uncertainty • Victimization	• Health • Safety • Certainty
Life Story	• individual life histories and personal attachments to place	Identity	• Countryside Ideal • Country People	• Freedom • Control • Continuity

In regards to the second criteria above (thematic dimensions), when communicating personal experiences each thread tapped a particular thematic dimension. In Table 4.1, the 'thematic dimension' of each story thread refers to the thematic content of the story. The thematic content of story threads corresponds with those categories used to group the thematic findings presented in Section 2. For example, Section 2 of this chapter identified identity as prominent thematic dimension. In addition, the thematic analysis revealed threats and ideas of right and wrong to be two other realms that were important to the experiences participants described.

As each story thread relayed experiences they also communicated emergent themes found throughout the interviews. When loosely grouped emergent themes form the thematic dimensions introduced earlier. For example, conduct stories worked within the dimension of ideas of right and wrong to communicate themes such as blame, irresponsibility, rights and duties. Horror stories worked within the dimension of threats and dangers to communicate themes such as health and safety, uncertainty and mistrust. The life story worked within the dimension of identity and communicated themes such as the country ideal and the country person. The stigma story worked within the same dimension to communicate themes around the resister identity, victims and contaminated communities.

As story threads communicated themes and experiences they also revealed local norms about what participants thought was 'ordinary,' acceptable and good and in this way represented the community values and beliefs speaking through the stories of participants. Story threads reaffirmed how participants believed a community 'ought' to function. In this capacity, participants used story threads to evaluate the siting process to show how it was antithetical to how they viewed their community. For example, conduct stories functioned to place the siting process in context with what participants viewed as 'right and proper' behaviour by community members. This story thread showed how communities are defined by notions of loyalty, membership, duty and trust. Similarly, stigma stories functioned to place the siting process in context with how communities ought to function. They reaffirmed that communities should stand for acceptance, solidarity, and belonging. Horror stories functioned to place the siting process in context with past precedents of sour gas exposure. This story thread communicated how communities should function to protect health, safety, and certainty. Finally, the life story functioned to place the proposed wells in context with the biographies of participants: biographies rooted in freedom, control, and continuity.

4.4.3 The Pattern of Story Threads: A Common Tapestry

By linking experiences, themes and community values, story threads represent an important way the respondents made sense of their lives and communities. Story threads integrated the individual (life story) with the community (stigma story), they link the present to the past (horror) and they identify the good from the bad (conduct).

The consistency of these findings suggest that respondents invoked a common meaning system – a system of values and beliefs – to make sense of what happened in their communities. Collectively the story threads represent how participants understood the 'good' In other words, the story threads were 'cultural documents' (Becker, 2000; Finnegan, 1997) that reflected community values and beliefs such as:

- continuity, freedom and control;

- healthy, wellness, safety and certainty;
- trust, duty and loyalty; and
- solidarity and social acceptance.

These qualities comprise the 'good life' and together they represent the template against which participants evaluated the siting process and how they believed communities 'ought' to function.

4.5 Chapter Summary

This chapter has presented three sets of findings: two community stories (composite sketches), emergent themes and an interlocking set of story threads. Community stories were reconstructions of what happened in each case. They were derived from data collected through interviews and verified through comparisons with media reports and public records. While reconstructing events participants also communicated common meanings and experiences that were captured as emergent themes in this analysis. Finally, emergent themes were linked to identify four common story threads: the life, horror, conduct and stigma stories. Story threads brought together individuals and communities, the past and the present to weave a pattern expressing the community values of the 'good and right life.'

5 THE MORAL GEOGRAPHY OF LOCHEND AND CLEARWATER: PRESERVING THE 'GOOD LIFE' THROUGH SPATIAL EXCLUSION

5.1 Introduction

This thesis has traced the responses of two groups in two communities to the siting of sour gas development. Many of the concepts associated with risk, moral geographies, and storytelling introduced in Chapter Two are relevant for understanding the grassroots initiatives that mobilized outside of Calgary and Rocky Mountain House. The aim of this chapter is to present an approach that builds on existing understandings of how and why communities resist. To do so, this chapter explores how the findings presented in Chapter Four illuminate how and why participants engaged in collective action. In doing so, this research sheds light on the processes through which respondents became politically conscious and willing to participate in collective struggles to defend their respective locales against sour gas development. The focus of this discussion is on those dimensions of political activism that are rooted inside of us as individuals, including things such as emotions, our biographies, and passions as well as those shared symbols that serve as the locations for struggle and resistance.

Activists working to stop changes to their locales are often referred to as "NIMBY'ists," and are often portrayed as narrow-minded, uninformed, mistrusting, risk adverse, and highly emotional (Kraft & Clary, 1991; Smith & Marquez, 2000). NIMBY movements frustrate developers and policymakers who often face situations of 'siting gridlock' that effectively block the collective benefits that would have accrued from the successful siting of the proposed facility. For this reason, NIMBY activists are generally labelled 'trouble-makers.' However, recent literature on the NIMBY phenomenon, particularly that related to technological risk, has shown that NIMBY activists may not be the irrational, self-interested troublemakers they are often made out to be. Many activists are motivated by what are generally seen as noble sentiments such as concerns over health and safety (Freudenburg & Pastor, 1992). This discussion argues that contrary to the stereotypical 'NIMBY' image, the participants interviewed for this research were motivated by the desire to defend core 'moral' sensibilities, a realm called the 'good life'

(Baxter, Eyles & Elliot, 1999; Gaffin, 1997). By opposing proposals to drill for sour gas, group members sought to uphold shared notions of the 'good life' in the countryside by maintaining spatial distance/boundaries from pollution (Duncan & Duncan, 2001). In this context, through group action these people defended a geographic vision of 'the good life.'

5.2 Restoring Order: Crisis Communality, Boundary Maintenance, and Spatial Exclusion

To illuminate how and why participants engaged in collective struggles, concepts of crisis communality, boundary maintenance and spatial exclusion will be explored. Crisis communality stands for the bonds of solidarity that are formed when the social order is threatened (Knox & Pinch, 2000; Mackenzie & Dalby, 1997; Pile & Keith, 1997). External threats to the social order often produce particular expressions of 'community' (Dalby & Mackenzie, 1997). Bonds of cooperation, friendship, trust, solidarity and loyalty are forged as individuals work together to restore order. Crisis communities, also referred to as 'communities of resistance,' are comprised of individuals who share with each other a collective perception of the external threat and work with one another to block it (Pile & Keith, 1997; Keith & Pile, 1993). Underlying these shared perceptions and collective actions are shared social and spatial boundaries between what is seen as the same and different, good and bad, and appropriate and inappropriate (Douglas, 1967; 1992; Douglas & Wildavsky, 1982). Maintaining boundaries becomes the raison d'etre of crisis communality. Crisis communality can therefore be seen as an expression of underlying processes of boundary maintenance.

While the notion of boundaries has been a continuous theme throughout the geographical literature (Gregory, 1994), the concept of 'boundary maintenance' has only been recently articulated by Dear et al. (1997), Stallybrass & White (1986), Sibley (1995) and Wilton (1998). The concept is rooted in the assumption that distinguishing between same and different is an integral component of maintaining and understanding threats to the social order (Douglas, 1967; Sibley, 1995). The ability to distinguish between same and different is dependent upon our ability to impose boundaries, or partition one thing from another (Wilton, 1998). These boundaries are both social (for example, safe and dangerous) and spatial (for example, the rural and the urban). As described earlier in Chapter Two, the social and the spatial are interdependent (referred to as spatiality). In effect, where we draw social distinctions, we often also emplace spatial ones, the product being *socio-spatial* boundaries (Fig. 5.1). For example, as illustrated in the figure below, boundaries between clean and dirty, sacred and profane, safe and dangerous are represented by the difference between the rural and the urban, the residential and the industrial or a park and an alley. A transgression occurs when socio-spatial boundaries are crossed by something socially, culturally or physically 'out of place.' The result is anxiety and crisis that precipitates boundary maintenance: the act of keeping things (others, objects) in their place. Pollution itself can be conceptualized as 'something out of place' (Douglas, 1966; Longhurst, 2001). Therefore notions of pollution are often the basis of struggles over socio-spatial boundaries (Douglas, 1966; Longhurst, 2001; Lupton, 1999).

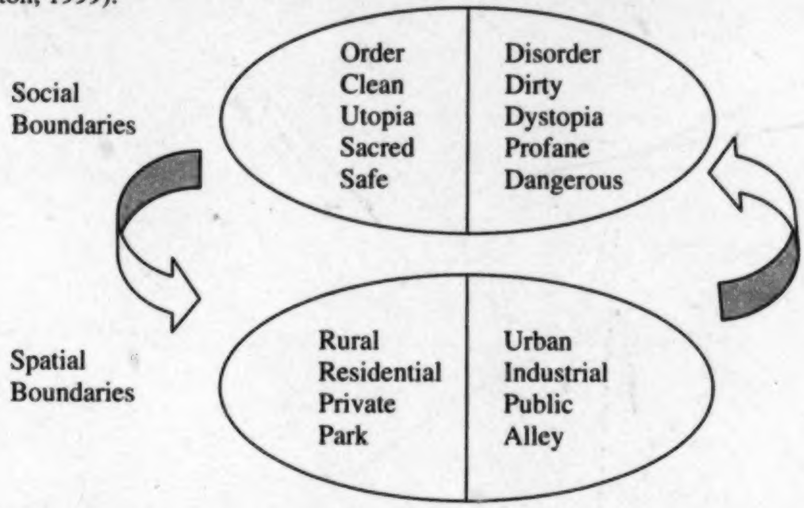

Figure 5.1 Socio-Spatial Boundaries and the Framework of Boundary Maintenance

As part of socio-spatial boundaries, boundary maintenance often involves physical separation, which functions to affirm and reinforce divisions between same and different. Spatial exclusion is a means of ensuring separation and maintaining socio-spatial boundaries in order to uphold individual and collective identities (Sibley, 1998). In the research presented here, such collective identities include country people and the country place idyll (Duncan & Duncan, 2001). Physical proximity to things that challenge boundaries (for example, sour gas), both real and symbolic, pose a threat to these collective identities. When spatial exclusion serves to preserve a 'clean space' by expelling 'dirty' threats such as sour gas pollution, it can be described as a case of 'spatial purification' (Sibley, 1995). The concepts of crisis communality, boundary maintenance, and spatial exclusion (spatial purification) are rooted in the cultural-symbolic perspective introduced in Chapter Two (Douglas, 1966; Douglas & Wildavsky, 1982; Lupton, 1999). This perspective shows that ideas about pollution, threats and risk function to maintain socio-spatial order by preserving the external and internal boundaries of community, and by policing the boundaries that differentiate insiders from outsiders, centre from periphery and what belongs and what does not (Lupton, 1999).

5.2.1 Defining the 'Good Life': Crisis, Boundaries and Exclusion in Lochend and Clearwater

Studying the mobilization of local opposition to sour gas development is an opportunity to analyze the core sensibilities and values (a construct I call the 'good life') that underscored the crisis communities in Lochend and Clearwater. In this way, the two siting disputes examined serve as *a vehicle* to examine dimensions of sour gas politics. Namely, that definitions of what is right, good and appropriate are achieved through boundary-maintenance and spatial exclusion, often in reaction to what is deemed socially or geographically inappropriate or 'out of place' (Cresswell, 1996; Sibley, 1995; Smith, 2000). One participant summed this up as follows:

> The county had designated this area for rural acreage developments, country residential acreage developments, and it was farmland so this was not a suitable place to put it in the first place…I mean we have to live with the oil and gas industry, but we do not have to live with it at our back door. – Rhelda, Farmer, Clearwater

Sour gas development and its associated pollution was out of place and its potential proximity threatened the socio-spatial order of Lochend and Clearwater. Such instances of spatial transgression were central to the cases of community action under examination. Studying them yields important insights to the underlying motivations of community actors. Put simply, "by studying the margins of what is allowed we come to understand more about the centre – the core – of what is considered right" (Cresswell, 1996, pg. 21). What the following discussion will show is that the processes of crisis communality in Lochend and Clearwater were underscored by shared socio-spatial boundaries delineating right and wrong, appropriate and innapropriate and good and bad (Cresswell, 1996; Sibley, 1995; Wilton, 1998). These boundaries are reflected in the stories participants used to describe the events of each case and their experiences. Furthermore, the preservation of these boundaries, both social and spatial, was accomplished through spatial exclusion (Duncan & Duncan, 2001; Sibley, 1995).

5.2.1.1 Crisis Communality and Community Stories

Participants perceived the proposal to drill sour gas as 'out of place' with how they saw their community, themselves and the places where they lived (Baxter, Eyles, & Elliot, 1999; Gaffin, 2001). Viewed as a potential transgression against their collective, 'country idyllic' sense of place, the proposals were an affront to the internal 'order' of both country residential communities (as group members perceived it) and thus participants felt compelled to resist. In both community stories, the notification and mobilization episodes describe the moment of 'crisis' when participants learned of the proposal. These episodes of crisis reflect moments of 'disorder,' of 'boundary dislocation,' and of 'ontological insecurity' (Baxter, Eyles, & Elliot, 1999) and in both cases, these feelings of crisis were transformed into collective action.

The mobilization of residents against the threat of sour gas was an expression of a specific type of communality, and, by extension community. Both community stories preserve a shared sense of 'crisis communality' that sustained the necessary social ties and interaction for a temporary 'community of resistance' (Bell & Newby, 1976; Keith & Pile, 1993; Pile & Keith, 1997; Knox & Pinch, 2001). Participants across both cases perceived the proposal as dangerous and unfair. The danger and unfairness of each proposal was discussed between neighbours over the phone, in living rooms and in town halls. In both groups, these shared perceptions of the proposal were cultivated into social ties strong enough to sustain strategic alliances between people from a variety of backgrounds. Community group membership was nurtured by a sense of community solidarity that saw past differences between farmers, acreage dwellers and even oil workers. Strong moral overtones such as describing group members as "the salt of the earth…motivated and driven by the purest of things" were used to emphasize the deep sense of commonality and solidarity that group members sensed in one another. In one another, group members recognized a collective identity – country people being unfairly exposed to danger. Their shared 'way of seeing' the proposals as spatial and social injustices reflects shared boundaries between right and wrong, appropriate and inappropriate and good and bad. These strong, social ties countered the 'moral minimalism' that characterizes most suburban and acreage communities (Baumgartner, 1988).

The following quote is emblematic of both the sense of crisis that arose when boundaries were threatened and the subsequent collective responses that were mobilized to preserve those boundaries:

> But when this came along it was just like they came into the community and we had to realize we were all being pushed into one corner whether we liked it or not. It was the only way. We had to circle the wagons and start shooting.
>
> - Eric, Acreage Dweller, Clearwater

The above quote illustrates how communities of resistance form. The image of the wagon circle symbolizes the role boundaries play in moments of crisis. In this quote, the wagons encircled core values and beliefs to protect them from outside threats. In the context of the cases examined for this research, the image represents the expression of resistance in defence of the good life.

5.2.1.2 Boundary Maintenance and Story Threads

In both cases under study, the collective response towards crisis was an impulse to control boundaries: social boundaries between clean and polluted, and spatial boundaries between their community and sour gas. Throughout the interviews, participants' story threads articulated the meaning of a good life by tracing out the 'boundary markers' that defined what participants perceived as an ideal, good community.

Boundary markers are those values that define what a community is in its ideal form and how a community ought to function (Dalby & Mackenzie, 1997). They delineate between same and different, appropriate and inappropriate, and good and bad communities. The ideal of community is a moral good in and of itself, and as such, community is an integral component of how people strive towards contentment, happiness and fulfillment (MacIntyre, 1984; Smith, 2000). In the cases examined here, boundary markers demarcated what constituted a 'good life' by defining three normative dimensions of community: being, behaving, and belonging. Being stands for how people aspire to see themselves. Behaving stands for how people see proper action. Finally, belonging stands for identifying and fitting in with a larger group. By identifying the boundary markers across each of these normative dimensions of community, story threads constructed, reflected and reinforced the ideal notion of an 'acreage community' – one symbol of the good life.

Community is a normative ideal (Sacks, 1997; Silk, 1999; Smith, 2000). By 'normative ideal' what is meant is that community is a good 'in and of itself.' The word 'community' is most often used with a positive connotation and is generally associated with a place in which people know and care for one another (Smith, 2000). In regards to the first normative dimension of community, 'being,' a community is good because it provides a sense of direction or purpose for individual lives. People develop a sense of who they are through shared, communal identities (MacIntyre, 1984; Taylor, 1989). History, language or culture can provide the grounds for a shared identity, as can a shared sense of place or place attachment (Sack, 1997). If knowing who you are is good, and it is attainable through a shared sense of community, then belonging to a community is imperative (McIntyre, 1984; Bellah et al. 1985). To not belong carries ramifications for one's sense of self and place in the world. In regards to the second dimension, 'behaving,' a good community requires its members to behave responsibly towards one another. A good community is comprised of people who recognize their interdependence and who aspire to be responsible persons by promoting virtues such as loyalty, duty, and trust. In doing so, they can secure the health, wellness and safety of the community. Finally, in regards to the third dimension, 'belonging,' a community is good because by belonging to one a person is not only able to make sense of themselves (as described above) but also gain access to an invaluable network of social support. In this sense solidarity and social acceptance are key markers of belonging and the door to social capital. As shown in Table 5.1, the story threads found in this research mapped the boundary markers that define these three key dimensions of community (being, behaving and belonging).

Table 5.1 Normative Dimensions of 'Community' and its Boundary Markers

	Normative Dimension		
	Being	Behaving	Belonging
Boundary Markers	Continuity	Trust	Solidarity
	Freedom	Loyalty	Social Acceptance
	Control	Duty	
		Health & Wellness	
		Safety	
		Certainty	

The telling of stories that legitimated boundary markers (and by extension, the normative dimensions of community) was a primary strategy that participants used to explain and justify their actions. As Dalby and Mackenzie state, during instances of social mobilization, "the past becomes a 'resource,' which may be selectively mined in the creation of new boundaries of a community whose social or geographical boundaries are threatened" (1997, p. 102). Storytelling is an important social act and strategy in cases of crisis communality and resistance (Dalby & Mackenzie, 1997; Johnstone, 1989; Poletta, 1998). Along these lines Arthur Frank adds,

> People do seek what is better and they form communities based on agreements about what is better. These communities are reaffirmed in shared stories that display those values, even as new stories question old values and propose revisions to what is considered better (2002, p. 16).

Story threads such as the life story, horror story, the conduct story and the stigma story were shared reconstructions of the past that functioned as a reason for cooperation and a justification for resistance. Through their telling, they articulated the boundary markers delineating a shared vision of community and by extension a good life. This suggests that in the cases examined the construct of the good life was an important symbol of the dominant socio-spatial order – the contravention of which served as the basis for the participant's responses to proposals to drill for sour gas. As Tuan reminds us, "the good life haunts us. Everything we do is directed, consciously or subconsciously, towards attaining it" (1986).

5.2.1.3 Boundary Rhetoric: Articulating the Boundary Markers of the 'Good Life'

As they were told, the life story, horror story, conduct story and stigma story threads functioned as a type of 'boundary rhetoric' that articulated the community's boundary markers. Boundary rhetoric is a type of discourse that maps the normative dimensions of community (i.e., being, behaving, and belonging) by affirming community values or identifying what threatened them (Maines & Bridger, 1992; Sack, 1997; Smith, 2000). Boundary rhetoric is a tactic as part of a larger normalizing strategy. In this research, boundary rhetoric was integral to how participants were justifying their actions. In the context of the story threads uncovered in this research, two types of boundary rhetoric are identifiable (Table 5.2): affirmative rhetoric or purification rhetoric (Fisher, 1997). Affirmative rhetoric is designed to promote community solidarity and unity in accordance with a new or old idea. In the two cases examined, the idea of the countryside as a source of continuity, freedom and control provided a common identity for the acreage communities in both locales (Fisher, 1997). Purification rhetoric is designed to identify and erase past aberrations or violations of norms in the community. In these case studies aberrations included the danger of sour gas development and the irresponsible conduct of proponents (Fisher, 1997; Sibley, 1995). These two types of discourse functioned to identify what was inside or outside normal conceptions of community and by doing so they mapped the shared boundaries that comprised the dominant socio-spatial order of Lochend and Clearwater.

Table 5.2. The Discourse of Boundary Maintenance: Boundary Rhetoric

Boundary Rhetoric	Normative Dimension	Story Thread	Emergent Themes	Boundary Markers
Affirmative Rhetoric	Being	*Life Story*	Country Place Idyll, Country People	Continuity, Freedom, Control
Purification Rhetoric	Behaving	*Horror Story*	Victims, Threats to Quality of Life, Uncertainty,	Health &Wellness, Safety, Certainty
		Conduct Story	Blaming, Irresponsibility, Violation of Rights, Mistrust	Loyalty, Duty, Trust
	Belonging	*Stigma Story*	Resisters, Community Exclusion	Solidarity, Social Acceptance

Affirmative Rhetoric

Life Stories directly affirmed the boundary markers of what constitutes a good and right life by articulating how participants aspired to see themselves (normative dimension of being) (Table 5.2). The life story thread did so through emergent themes such as the country person and the country place ideal using boundary markers of continuity, freedom, and control. The meaning of the community was encapsulated in the web of community and place stories surrounding country people, country life and the country place ideal. By communicating these aspects of the good and right life, life stories showed what lay inside the boundaries of community (what the wagons sought to protect, to reuse the metaphor). For participants, the search for the good life was accomplished through living the country lifestyle and being a country person (Bunce, 1999; Tuan, 1986). The impulse behind employing the life story thread was to justify the actions taken to defend against sour gas development. By affirming what stood at the center of each community, the life story thread illustrated how sour gas pollution threatened collective identities rooted in the perception of the countryside as a place of continuity, freedom, and control.

Purification Rhetoric

Telling a horror story complimented the life story by articulating another dimension of community – behaving (Table 5.2). Horror stories did so by showing the horror of bad behaviour and the consequences for community safety, good health, and certainty. Rather than directly affirm aspects of the good life, horror stories indirectly did so by identifying that which threatened the good life. By doing so, horror stories identified what lay outside the boundaries of community by evoking themes such as victimization, uncertainty, vulnerability and threats to quality of life. These concepts were antithetical to the core sensibilities of participants, especially the sensibilities of continuity, control and freedom that were constructed through life stories. By identifying what lay outside the boundaries of community, horror stories indirectly affirmed what was central to the good and right life: values such as safety, good health, and certainty. Horror stories illustrated how purification rhetoric functions to monitor boundaries and identify where transgressions have occurred (Fisher, 1997). On the surface the horror story articulated why sour gas is dangerous and how it could make members of the community sick. But the horror story also expressed how the good life was defended by maintaining the purity of the body and by translation, the community (Douglas, 1969; Lupton, 1999a). This was accomplished by monitoring its boundaries and excluding pollution.

The conduct story thread was closely related to the horror story and also articulated the normative dimension of behaving. Conduct stories described the improper behaviour that led to or was associated with the consequences described by the horror story. Similarly to the horror story, the conduct story operated as purification rhetoric in the way it identified those aspects of the proposal that threatened notions of proper action. By describing how rules were broken, conduct stories revealed details about the norms and assumptions participants held about how members of the community should behave. For example, conduct stories presented notions of what makes a good neighbour. In particular, conduct stories describe instances of mistrust, blame, irresponsibility, and the violation of rights. In doing so, the conduct story thread indirectly traced the contours of proper behaviour (necessary for living the good life). By defining acceptable norms of behaviour, conduct stories mapped the boundary markers of community to articulate what lay outside of it. These boundary markers included expectations of accountability (duty), expectations of how others should treat 'us' (trust), and the obligation to grant the same to others (loyalty). Themes reported by participants such as blame, irresponsibility, and the violation of rights stood in opposition to notions of the good life. By describing how oil and gas companies sometimes broke the rules, conduct stories illustrate why the sour gas proposals were positioned on the outside of the community.

The stigma story thread articulated the final normative dimension of community: belonging. Belonging represents the need to identify with a larger group. Like the horror and conduct stories, stigma stories functioned as purification rhetoric: they identified violations of norms in the community. In particular, the stigma story articulated how the actions of group members did not fit within the scope of acceptable behaviour defined by the larger community within which their communities were nested - Alberta. By virtue of their actions, participants felt they were labelled and positioned on the outside of the larger community of Alberta. Participants had to negotiate and overcome these processes of community exclusion to legitimate the actions they took. Telling stigma stories helped to regain the authority necessary to bring acceptance to actions taken. Stigma stories served to diagnose oppressive identities such as the 'radical' and in the process delineated the dimension of belonging. For example, in telling stories about resisters and community exclusion stigma stories affirmed the value of solidarity and social acceptance as important markers of community. Stigma stories affirm the moral impulse to belong.

5.2.1.4 Spatial Exclusion: The Spatial Purification of Lochend and Clearwater

These underlying processes of boundary maintenance found their outward expression in the group action in Lochend and Clearwater. By blocking proposals to drill for sour gas, community members successfully 'purified' their space and preserved accepted notions of the good life (Sibley, 1995). Figure 5.2 below summarizes how participant's affirmative and purification rhetoric served to articulate the socio-spatial boundaries of the good and right life. Story threads either directly affirmed community values (as was the case with the life story) or identified those elements of the proposal that threatened the community's values (as was the case with the horror, conduct and stigma stories). Figure 5.2 shows how affirmative rhetoric was characterized by emergent themes such as the country idyll and country people. These themes articulated important boundary markers such as continuity, freedom, and control. In addition, purification rhetoric was characterized by emergent themes such as victimization, uncertainty, and mistrust. These themes sketched important boundary markers such as safety, certainty, and trust. While sketching these social boundaries, affirmative rhetoric and purification rhetoric reinforced the spatial boundary between acreage communities and sour gas development. Acreage communities such as Lochend and Clearwater evoke images of nature, the country, private property and home. On the other hand, sour gas development brings to mind things such as contaminated communities, industrialization and polluted spaces. The boundary rhetoric reflected the boundary-maintenance that was the basis for the actions of participants. These actions served to reinforce social boundaries by preserving spatial ones, and by doing so, defend the socio-spatial order of Lochend and Clearwater.

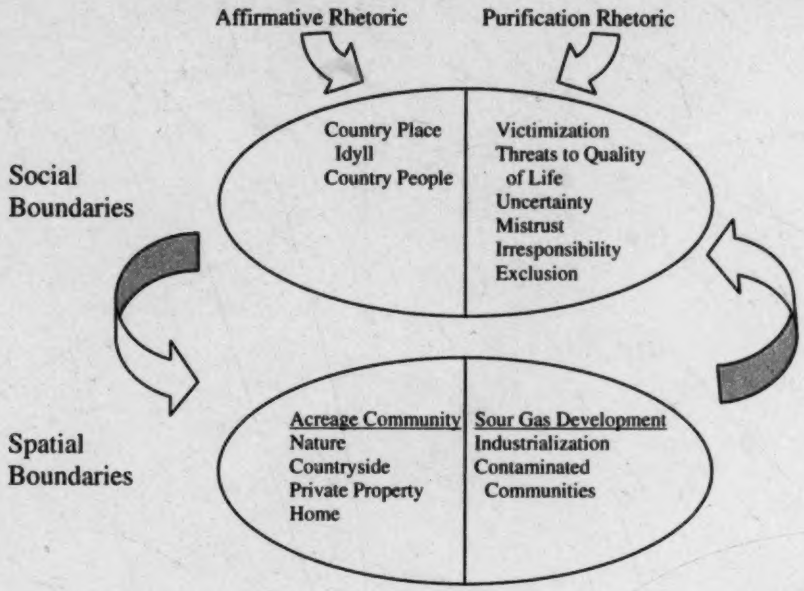

Figure 5.2 Socio-Spatial Boundaries of Sour Gas Politics

The social boundaries articulated through boundary rhetoric were inextricably linked to spatial boundaries. Defending spatial boundaries to preserve social boundaries amounted to a case of spatial purification. Spatial purification was accomplished by blocking the well licenses (directly as in Clearwater or indirectly as in the case of Lochend) required to site sour gas developments. Working through the quasi-judicial system, intervener groups in Lochend and Clearwater were able to 'circle the wagons' around their countryside, acreage communities to preserve emplaced social boundaries around boundary markers such as control, freedom, continuity, health, wellness, certainty, trust, loyalty, social acceptance and solidarity (Table 5.2) – otherwise summarized in the concept of the good and right life. These boundary markers are encapsulated within the shared stories participants told during interviews while recounting the conflicts.

The instances of spatial purification in Lochend and Clearwater, in particular the prominence of purification rhetoric, speaks to the degree of 'technological stigmatisation' attached to sour gas development in Alberta. Kasperson et al. (2001) define technological stigma as a mark placed on a technology that identifies it as different and deviant, flawed or undesired. As horror stories and conduct story threads attest, pollution associated with sour gas development resonated with the dimensions articulated by Jones et al. (1984) that influence the formation of stigma including:

- *Concealability* – the ability for it to be hidden;
- *Course* – how it changes over time;
- *Disruptiveness* – the degree it blocks communication;
- *Aesthetic qualities* – how it changes it's possessor;
- *Origin* – who and where it is attributable; and
- *Peril* – how imminent and dangerous it is.

The dimensions above are antithetical to the concept of the 'good life,' and the socio-spatial order of acreage communities. The discourse of purification rhetoric reflected how sour gas technology was perceived as deviant, flawed, undesired and out of place. Blocking plans to develop sour gas was a means to maintain the purity and order of the acreage communities.

5.3 Moral Spaces: The Moral Geography of Lochend and Clearwater

An important aspect of spatial politics is how places and landscapes are materially and discursively constructed, defended and used: the practice of 'ordering' space. As the cases examined for this thesis demonstrate, 'ordering' was achieved through processes of crisis communality, boundary maintenance, and spatial exclusion. I argue this amounts to a moral geography because while reacting to proposals to drill for sour gas, participants were answering questions about what was right, appropriate and good – a realm called the good life. Doing so transformed the spaces of Clearwater and Lochend into a moral space.

This reaffirms geographical theory arguing that positioning oneself in relation to the 'good' unfolds in concert with the social and material construction of places and landscapes (Smith, 2000; Tuan, 1989). For example, in the cases examined, participants' collective aspirations towards dimensions of the good life such as continuity, control and freedom were made real in a geographic sense – first through the spatial practice of country residential development and second through the spatial exclusion of sour gas development. The latter was a means to preserving the former. In the cases examined, the threat of sour gas sparked opposition that was enacted through communities of resistance who shared, as their source of communality, cultural narratives about place, the body and community.

The community action examined in this research was mobilized in response to an outside threat. Here the cultural-symbolic perspective on risk is telling (Douglas, 1992). A critical aspect of the cultural-symbolic perspective is that at all times in all places the world is moralized and politicized (Douglas, 1992). The very notion of 'risk' itself can be approached as a moral impulse – a diagnostic – used to define order and a just society. In such a world people form patterns of social solidarities that influence how they judge matters of trust, blame, fairness and accountability (Douglas, 1992). A group's underlying assumptions, values, and attitudes towards order, hierarchy, and a just society will undoubtedly influence how they respond to risks (Douglas, 1992). NIMBY controversies centering on environmental risks are windows through which we can look upon these values, attitudes and assumptions. In cases where risks and hazards are in the environment, opportunity exists to learn more about how these moral values and beliefs actively contribute to the social production and reproduction of space and place. Community action taken in response to environmental risk can thus be conceptualized as reactions to the inappropriate, bad and wrong, and as such they trace a particular moral geography. In the cases examined in this research, community action traced the moral geography of country residential development.

The community action in Lochend and Clearwater was rooted in the moral geography of country residential development and the exclusionary spatial practices that functioned to preserve it (Duncan & Duncan, 2001). Moral geographies are spaces or places that transmit ideas about what is right, just, and appropriate (Cresswell, 1996). Moral geographies are often comprised of divisions of space (classification) that are meaningful in relation to their opposites (differentiation) and are often placed in the realm of the natural (naturalization) (Cresswell, 1996). At the heart of understandings of the 'good' life in the country is the country place ideal: a division of space (the rural) that is meaningful in relation to its opposite (the urban) and is often placed in the realm of the natural (wilderness). As this research demonstrated, one way moral geographies are given 'order' is through processes of crisis communality, boundary-maintenance, and spatial exclusion (Cresswell, 1996). In both cases the normative aspects of country residential living (the good life) was maintained by ensuring spatial distance (via crisis communality/boundary maintenance/spatial exclusion) from sources of pollution.

Understanding the nature of places such as country residential developments and how they operate as moral geographies is an important first step in deconstructing the basis of local opposition to facilities with negative externalities or 'spill-over' effects such as sour gas wells. This approach grants insight to why acreage owners are considered the thorn in the side of oil and gas developers across the province[18]. In contradiction to this caricature, this research has shown that social stereotypes about NIMBY 'troublemakers,' are not always fitting. The actions of participants in this research were rational and realistic responses to socio-spatial challenges to core moral sensibilities that underlie common, universal expectations of community. Namely, that community is a source of identity (being), and is premised on responsible action (behaving) and solidarity (belonging). By approaching places and landscapes as moral geographies, proponents who wish to site LULU's can better understand the quality and level of local concern they encounter and design the most appropriate consultation and mitigation strategies in response.

5.4 Chapter Summary

To review, I have explored the spatial politics of sour gas by examining the rhetoric (affirmative and purification) participants employed while reconstructing their struggles against sour gas. I argued that a critical dimension of community resistance is a realm called the 'good life.' To show how community responses can be understood in the context of aspirations towards the good life I applied the concepts of crisis communality, boundary maintenance, and spatial exclusion. I found that the stories told by participants articulated the socio-spatial order of country residential living across three dimensions:

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[18] I heard this mentioned in separate conversation held with AEUB members and oil and gas operators outside of the scope of this research project.

being, behaving, and belonging. As affirmative or purification rhetoric these stories articulated the boundary-markers (what I captured as emergent themes) that were grounds for struggle as participants attempted to defend their communities. Furthermore, stepping back we can see how these cases are examples of moral geographies. In each case, spaces were 'ordered' through resistance and exclusion to reflect underlying moral values and beliefs held by members of each community of resistance. Geographies of resistance and the landscapes of exclusion that resulted were emblematic of the geographic vision of the good life shared by participants. As a result, we can conclude that belittling community resistance as the stereotypical 'NIMBY' syndrome (selfish, emotional, irrational) fails to capture the basis of community opposition examined in this research. The actions of participants were grounded in common moral precepts (being, behaving, belonging) common to all Albertans.

6 CONCLUSION

6.1 Introduction

This study has examined the spatial politics of sour gas development in two Alberta communities by (1) retracing the events of two siting disputes, (2) exploring how respondents mobilized and justified community action, and (3) adapting the concepts of socio-spatial boundaries and moral geographies to explain some of the processes underlying community opposition. In doing so, I have developed a taxonomy of storytelling (story threads) employed during sour gas politics, explored the relationship between storytelling and spatial politics, and examined the relationship between environmental struggle, moral geographies and modernization risks. Together these highlight the potential usefulness of literatures on risk, moral geographies and narrative for understanding the spatial politics of sour gas development in rural Alberta. As well, they sketch a potential new research direction investigating the linkages between personal storytelling, community resistance and environmental risk.

6.2 Study Contributions

6.2.1 Theoretical Contributions

My primary theoretical contribution is adapting the notion of socio-spatial boundaries and moral geographies to the spatial politics of sour gas development. This study identified crisis communality, boundary-maintenance, and spatial exclusion as three useful concepts for understanding how the spatial politics of sour gas unfolded in two peri-urban, country residential communities. The three concepts can be summarized as follows:

- *Crisis Communality*: represents the strong social ties forged in response to a threat or attack;
- *Boundary Maintenance*: the process of delineating between same and different, good and bad, and right and wrong; and
- *Spatial Exclusion*: these are practices or actions that demarcate in space what belongs and what does not belong.

These concepts were useful in explaining the responses of community members in each case. They helped illustrate how proposals to drill for sour gas threatened the socio-spatial order of each acreage community. In Figure 6.1, the theoretical concepts used are related to aspects of each case study. For example, community responses to the Shell and Canadian 88 proposals can be understood in the context of the socio-spatial order of country residential communities. This order is symbolized by the notions of the 'good life.' The strong social ties forged in Lochend and Clearwater (crisis communality) were premised upon the shared socio-spatial boundaries held by group members. Group members perceived the proposed wells as out of place in their locale. The stories respondents told in interviews delineated why the wells in question were out of place and did not belong (boundary maintenance). These shared boundaries between good and bad, right and wrong and appropriate and inappropriate underscored the attempts by community groups to convince the regulators to deny Shell and Canadian 88 the well licenses necessary to drill (spatial exclusion). These processes of crisis communality, boundary maintenance, and spatial exclusion showed why the siting proposals were wrong and thus transformed both locations into important moral spaces (also referred to as moral geographies).

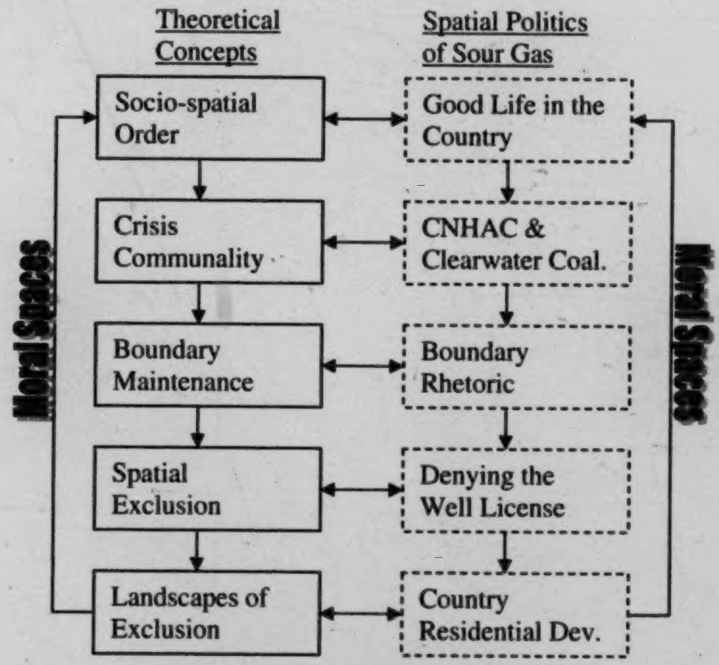

Figure 6.1 Theoretical Contribution

Four final observations can be gleaned from this research. First, 'place' and 'landscape' are key elements for our identity (Mitchell, 2000; Tuan, 1977). Who we are is reflected in the places we occupy and the spaces we control. These places range from the local, regional and global scale and include sites such as the nation, state, city, community, neighborhood, and home. Each location has a profound social meaning for us, and defines who we are and also how we live.

Second, stories are key elements of our identity (Nelson, 2001). They outline cultural expectations and guide moral action (Frank, 2000). People tell their own unique stories and in the process shape who they are. However, when composing these stories, people combine narrative types that culture makes available. It is these macro-stories we evoke and try to enact while living out our lives. Third, places are storied (Tuan, 1991). We know places through the stories people tell about them. Places have a narrative tradition and we enter into that tradition when talking about them. Often places communicate and reproduce dominant ideologies within society. In living our lives we enact the traditions embedded in our surroundings.

Finally, we live in a risk society (Beck, 1992, 1999). Everyday life has been increasingly colonized by the social and cultural imperative of risk (Lupton, 1999). More and more, as we become decoupled from tradition and our trust in others decays, we are forced to reflect on and confront these risks as we strive to construct the contours of our 'selves.' Calculating and interpreting risk, however, is a moral practice. More than ever we depend on stories to guide us and help us find our way towards living 'good' and morally valued ways of life. Everyday life in a 'risk society' is about negotiating the 'moral spaces' to do so. This dimension of spatial politics is a key aspect of contemporary society in the west. In this sense, the moral geographies of our lives are inextricably linked to the new realm of risks and hazards that modernity has produced.

6.2.2 Methodological Contributions

This study has made several methodological contributions to the existing literature. The primary contribution is the development of narrative analysis as a useful tool in qualitative research. Narrative analysis is a way to make sense of and communicate experience and has many promising applications in human geography. Already its usefulness has been acknowledged in sub-disciplines such as health geography (Kearns & Gesler, 2001). Its strengths are twofold. A narrative approach is sensitive to the temporal sequence individuals' sense in their lives and insert into their accounts. Second it is a holistic way of capturing the centered and de-centered understandings of place (Entriken, 1991). Considered together, these two attributes make narrative analysis amenable to generating situated and contextual understandings of spatial politics. In particular, two types of narrative discourse are useful for this purpose. These are:

- *Community Stories about Resistance:* shared accounts of collective action; and
- *Story Threads*: the stories that are woven into a given account of collective action.

Both types of discourse are valuable types of qualitative data because on one level they provide an account of what happened, but on another level they encode the expectations made available by culture that guide moral action. This type of 'talk' is very useful for researchers trying to understand instances of community action and processes underlying spatial politics.

6.2.3 Substantive Contributions

This research has provided two substantive contributions to the field of planning and development, especially in regards to community dynamics and company-community relations. First, this research has helped to demystify the NIMBY stereotype by showing that the actions of participants were not reflective of negative characteristics such as 'selfishness' and 'irrationality' but instead were motivated by basic community values and moral precepts. Thus, the spatial politics of sour gas development, exemplified by the cases examined in this research, can be reframed as a rational response. To take this further, instead of portraying the actions of participants as the product of a 'band of trouble-makers' (as is often the case in NIMBY conflicts), the actions examined in this research could be represented as actions symbolizing the virtues of citizenship. Trust, loyalty, and solidarity are core dimensions of citizenship, as is participation in the political process. In the sense that the community action examined here aspired to uphold these virtues, and did so by participating in institutional processes for resolving disputes (public hearings), they displayed some of the virtues of good citizenship. This point is important in regards to how policy-makers, regulators, and proponents of development should approach the public. Extending regard to the public affected by development begins by recognizing that their responses are valid, rational and part of maintaining a healthy democracy.

Second, this research has emphasized the importance of context when negotiating the spatial politics of development. In regards to this research, context stood for recognizing the role that the moral geography of country residential living played in shaping the response of community members to proposals to drill for sour gas. The fact that the world is a moral place and always politicized should inform where and how developers seek to locate facilities. Understanding the local context, especially in regards to how places (1) provide a source of identity (being), (2) reflect norms of proper behaviour (behaving), and (3) provide a source of solidarity (belonging), can enhance the way developers choose to site facilities with negative externalities and interact with the affected communities. Understanding the nuances of a place is critical for building healthy company-community relationships.

6.3 Review of methodology

In revisiting the study methodology it is clear that several aspects could have been improved. First, the examination of spatial politics could have been enhanced with a more balanced sample. The choice of snowball sampling was appropriate for capturing the core members of both community groups and exploring their experiences. However, a different understanding of community dynamics and community-company relations could have been obtained using a stratified sample. Experiences of landowners who were supportive of the proposal, landowners who were neutral, and the representatives of Canadian 88 and Shell Canada could have enhanced the depth of the analysis.

Second, a larger sample size would have enhanced the study results. Although the goal of qualitative research is not generalization, a larger sample size in both cases would have strengthened the believability of the results. Third, a more thorough participant feedback process would have benefited the project by strengthening the studies trustworthiness and authenticity. Respondents were given the opportunity to comment on preliminary results. A second phase whereby respondents could read and comment on final results would have been beneficial. Fourth, the study interview guide undoubtedly influenced the studies analytical results. The guide itself can be interpreted as a narrative. The role it played in structuring the responses of participants begs scrutiny. Although some participants required little probing and the guide was less influential in their account, others were less willing to control the interview and relied heavily on myself to probe and question. In future research using narrative analysis, the interview guide requires careful thought and planning. Researchers should take time to interrogate the underlying storylines that are sometimes subconsciously infused into interview guides.

Finally, it became clear after carrying out the research that issues such as the one under examination are sensitive and there is tremendous potential to seriously damage the lives of participants or disrupt communities. This issue relates directly to sampling strategies. Snowball sampling relies heavily on word of mouth. Such an approach, in a small community has the potential to cause disruption and damage as confidentiality cannot always be guaranteed.

6.4 Relocating Myself

At this point it is important to reflect on my own role as the researcher and assess how my own subjectivity influenced how this study unfolded. First and foremost, it must be pointed out that an important tension was constant throughout the entire research process. This tension revolved around the following: how much of my story was present in the stories shared by participants? This question strikes at the heart of the issue of authenticity. The storied quality of the interview guide has already been discussed. If interviews are inter-subjectively negotiated, and if personal storytelling is a social process negotiated between teller and listener, than how much of myself is in the stories I considered as data? How much of what was shared is dependent on respondent's perceptions of myself, where I am from and my motives? This question may not be answerable, but it nonetheless is important because it qualifies the discussion preceding this conclusion and disrupts the subject-object dualism that runs silently throughout all social research no matter how post-modern.

Second, my own theoretical leanings that presupposed the data collection and analysis stages should be assessed. To a certain extent this research could be accused of fetishizing 'the story.' Any researcher doing narrative analysis becomes a finder of stories and teller of stories. The object and mode of analysis becomes a narrative. But it is important to recognize what is being missed by a fanatic obsession with all things storied. Just as some experiences lie beyond language, important experiences may not lend themselves to a narrative form.

6.5 Chapter Summary

In summary, this research has shown that spatial politics is a symptom of a healthy democracy and in some cases reflects the moral order of our communities, places and landscapes. Discourse, in particular narrative discourse, is an important aspect of spatial politics. In this research, participant narratives legitimated resistance against sour gas development and positioned community action in relation to cultural understandings of moral 'goods.' Narratives created a 'moral space' by aligning aspects of identity, community and place to legitimize community action. This research has granted insight to the relationship between the social production of space and the reproduction of everyday moralities.

APPENDICES

Appendix A: Lochend Timeline

Date	Event
July 15, 1997	Canadian 88 Energy Corp. applies for well license
September – October, 1997	Calgary North H_2S Action Committee (CNHAC) forms
November 20, 1997	CNHAC holds public meeting at Lochend Lions Hall
January 20, 1998	Pre-hearing regarding application by Canadian 88 to drill level 4 sour gas well in Lochend Field begins
March 12, 1998	CNHAC holds public meeting at Bearspaw Community Centre, 200 people attend
May 4, 1998	Public Hearing begins in Calgary, Alberta
July 7, 1999	A conditional decision issued in favor of Canadian 88, barring 18 conditions
August, 1999 -	Lochend Review Group (Canadian 88, CNHAC, local residents and the Municipal District of Rocky View) assembled
Nov 12, 1999	Alberta Judge refuses to strike down Alberta Energy and Utilities Board (AEUB) decision on behalf of Calgary Regional Health Authority and the CNHAC

Appendix B: Clearwater Timeline

Date	Event
November, 1999	Shell Canada Limited approaches community regarding sour gas well proposal
December, 1999	Clearwater Coalition has first meeting at Arbutis Hall, 75 people attend
January, 2000	Clearwater Coalition protests Shell's first Open House
January 31, 2000	Pre-hearing regarding Shell's proposal begins
May – August, 2000	Mediation between Shell and Clearwater Coalition begins, compromise is not achieved
November 7, 2000	Public hearing begins at Dovercourt Community Hall outside of Rocky Mountain House
March 20, 2001	Decision issued in favor of Interveners

Appendix C: Informed Consent Form

Informed Consent Form: (Re)Constructing Arguments over Oil and Gas: A Comparative Case Study of Technological Risk Conflict in Alberta.

Community, Health and Environment Research Centre
Department of Earth and Atmospheric Sciences, University of Alberta
July 2002

Dear Sir or Madam,

Thank you for your interest in the project entitled **(Re)Constructing Arguments over Oil and Gas: A Comparative Case Study of Technological Risk Conflict in Alberta**. This study seeks to examine the risks and impacts that are associated with the development of Alberta's oil and gas resources and how these risks and impacts are interpreted by various groups in Alberta. This study is being conducted by Joshua Evans and Dr. Theresa Garvin from the Community, Health and Environment Research Centre in the Department of Earth and Atmospheric Sciences at the University of Alberta. Funding for this study has been in part provided by Dr. Theresa Garvin's Social Science and Humanities Research Council (SSHRC) Standard Grant entitled, "Making Sense of Sour Gas."

This study will survey those who have had in-depth experiences and interactions with the oil and gas industry, those with experience working in the oil and gas industry, and those individuals involved in regulating oil and gas activities to obtain their opinions about specific conflicts that occurred over oil and gas developments. The conflicts this project will consider are those revolving around the 1998 siting of a Level IV critical sour gas well by Canadian 88 Energy Corporation northwest of Calgary and the 2001 siting of a Level IV critical sour gas well by Shell Canada Limited outside of Rocky Mountain House, Alberta. Participants will be asked to recount their **(personal or professional)** involvement and experiences during these conflicts. The stories collected and the perspectives they contain will be useful in generating a greater understanding of how the risks of petroleum technologies are interpreted by various stakeholders such as landowners, communities, the oil and gas industry and government regulators.

Although this study involves developing important relationships with the above stakeholders, it has no ties to industry, community or government partners and will be conducted by an independent team of researchers from the University of Alberta. You have been asked to take part in one face-to-face interview. The interview will be informal, unstructured and will involve you recounting your **(professional or personal)** experiences from the conflict over the proposed Level IV critical sour gas well in the Clearwater area in 2000 – 2001. The interview will take approximately 1 hour of your time. The interview will be tape-recorded and later transcribed. You have the choice of using a pseudonym to replace your name and any distinguishing information. If you choose to do so, this pseudonym will be used to identify what you said in quotes used in future publications and serves to maintain your anonymity. Throughout the duration of the study all interview tapes will be locked in a secure location and will be destroyed following the completion of the study or upon your withdrawal from the study.

The findings from this study and any quotations obtained through interviews may be published in academic journals, on the website for the Community, Health, and Environment (CHE) Research Centre at the University of Alberta, or presented at conferences. Joshua Evans or Dr. Theresa Garvin will provide participants with a summary of the findings upon request.

Please understand that your participation in the study is entirely voluntary and you are welcome to leave the interview at any time as well as decline to answer questions during the course of the interview. Following the interview, you will have the option of commenting on the key findings that emerged out of our discussion. If the information is used for another study, the researchers will first request permission from you. I thank you for your interest and participation in this study. I hope that through your participation and cooperation we can help develop a deeper understanding of what is becoming a serious issue for many Albertans.

If you have any questions about this study, please contact the principal investigator: Joshua Evans at jde@ualberta.ca or Dr. Theresa Garvin at **(780)-492-4593** or **Theresa.Garvin@ualberta.ca**.

Do you wish to maintain your anonymity by replacing your name with a pseudonym?

Yes No

DECLARATION

I agree that I have read and understand the above information. I agree to participate in the survey about the 2000 – 2001 siting of a Level IV critical sour gas well by Shell Canada Limited outside of Rocky Mountain House, conducted by the Community, Health and Environment Research Centre at the University of Alberta on behalf of Joshua Evans and Dr. Theresa Garvin. I understand that the information given by me will be kept in strictest confidence by the researchers.

____________________ ____________________

____

(Signature)

(Participant retains one copy of signed informed consent form)

Appendix D: Interview Guide

A. Can you tell me a little bit about yourself?
B. How long have you lived here?
C. How did you hear about the proposal to drill sour gas?
D. How did that make you feel?
E. What did you think about it?
F. What happened next?
G. What was the public hearing like?
H. Were you happy with how it all turned out?
I. Where are the boundaries around your community? Did they change?[19]
J. Have we missed anything?
K. What happened next?

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[19] This question added after completing roughly half the interviews.

Appendix E: Notation Translation

Notation	***Description***
(...)	skipped interview text
italics	emphasized speech
[raised pitch]	description of participant intonation or behavior
...	pause in speech

Appendix F: Emergent Themes

Identity

Place Identity

- The countryside idyll
- The contaminated community

Social Identity

- County people
- Resisters
- Victims

Risk of Sour Gas

- Threats to quality of life
- Uncertainty
- Mistrust

Ideas of Right and Wrong

- Blaming
- Responsibility
- Rights and Duties

Appendix G: Participant Profile

Interview	*Sex*	*Occupation*	*Pseudonym*	*Case*
1	M	Agriculture	Tom	Lochend
	F	Agriculture	Nancy	Lochend
2	F	Entrepreneur	Mary	Lochend
3	M	Industrial	Fred	Lochend
4	F	Agriculture	Tammy	Lochend
5	M	Industrial	Gerald	Lochend
6	M	Agriculture	Mr. Natural	Clearwater
	F	Agriculture	Mrs. Natural	Clearwater
7	M	Industrial	Cory	Clearwater
	F	Housewife	Janice	Clearwater
8	M	Retired	Stuart	Clearwater
	F	Social Work	Anne	Clearwater
9	M	Social Work	Jeff	Clearwater
	F	Social Work	Sarah	Clearwater
10	M	Agriculture	Jack	Clearwater
11	M	Agriculture	Steve	Clearwater
12	F	Sickness Benefit	Michelle	Clearwater
13	F	Agriculture	Rhelda	Clearwater
14	M	Teacher	Paul	Clearwater
15	M	Wildlife Officer	Frank	Clearwater
16	M	Government	Tony	Both
17	M	Government	Dave	Lochend
18	M	Government	Tom	Lochend
19	M	Lawyer	Samuel	Clearwater

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